United States Court of Appeals

for the Second Circuit

APPENDIX

74-1496 ORIGINAL

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United State Court of Appeals

For The Second Circuit

KOPPERS COMPANY, INC., and UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION,

Plaintiffs-Appellees,

vs.

S & S CORRUGATED PAPER MACHINERY CO., INC.,

Defendant-Appellant.

APPELLANT'S APPENDIX

Volume I, pp. 1a - 300a

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UNITED STATES COURT OF APPEALS
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SECOND CIRCUIT

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C 106

00 926 DOCKET APPEAL

STANTINO J.

[redacted], J.

TITLE OF CASE

KOPPERS COMPANY, INC., and
UNIVERSAL CORRUGATED BOX
MACHINERY CORPORATION
vs.
S & S CORRUGATED PAPER
MACHINERY CO. INC.

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BASIS OF ACTION: PATENT INFRINGEMENT

SEEKS: Declaratory Judgment; Injunction

JURY TRIAL CLAIMED

ON

DATE	PLAINTIFF'S ACCOUNT	RECEIVED	DISBURSED	DATE	DEFENDANT'S ACCOUNT	RECEIVED	DISBURSED
24/70	COMPLAINT	15 00		5-8-74	Notice of Appeal	5 —	
23/70	Pd Treas.		10 —	3-25-74	Paid to Reas		5 —

ABSTRACT OF COSTS

TO WHOM DUE	AMOUNT

RECEIPTS, REMARKS, ETC.

PAT. # 2,988,236 June 13, 1961

KOPPERS CO. & ANO vs. S&S CORRUGATED PAPER MACHINERY

DATE	FILINGS—PROCEEDINGS	AMOUNT REPORTED IN EMOLUMENT RETURNS
7/24/70	COMPLAINT FILED. SUMMONS ISSUED.	1
7-31-70	Summons returned and filed. Deft srvd on 7-28-70.	2
8-14-70	ANSWER & COUNTERCLAIM of deft filed. Srvd on 8-13-70.	3
8-14-70	Deft's interrogatories to pltffs filed.	4
8-14-70	Deft's request to produce under Rule 34 filed.	5
10-13-70	Before ABRUZZO, J.- Case called - Conference held and adjd without date.	
10-13-70	Pltffs' reply to deft's counterclaim filed.	6
10-31-70	Deft's requrst for production of documents under Rule 34 filed.	7
12-24-70	Letter filed, noting change of firm name and address for attys for pltff.	8
12-31-70	Pltffs' notice to take the deposition of Mitchell Flaum and Albert F. Shields, on 1-20-71 filed.	9
1/27/71	Deft's request for admissions under rule 36 filed.	10
2/23/71	Pltffs' Answers to Deft's Interrogatories Filed.	11
2/24/71	Pltffs' Interrogatories to Deft. S & S CORRUGATED PAPER Filed.	12
2-27-71	Pltffs' answers to deft's request for admissions filed.	13
4/17/71	Pltffs' Response to Deft's request for production Filed.	14
5-24-71	Deft S & S Corrugated Paper Machinery Co.'s answers to pltffs' first set of interrogatories filed.	15
6/24/71	Deft's second set of interrogatories & request for production filed	16
7-31-71	Pltffs' interrogatories 86-115 to deft filed.	17
8-25-71	Pltffs' request for admissions filed.	18
9/16/71	Deft S&S's answers to pltff's interrogatories 86-115 filed.	19
9/27/71	Deft's response to request for admissions filed.	20
11-16-71	Before COSTANTINO, J.- Case called & adjd to 1-24-72 for trial at 10:00 A.M.	
1-4-72	Pltffs' answers to deft's second set of interrogatories 27-41 and request for production of documents filed.	21
1-24-72	Before COSTANTINO, J.- Case called - adjd to 5-4-72 at 10:00 AM for trial.	
4-12-72	Deft's third set of interrogatories and request for production of documents filed.	22
5-4-72	Before COSTANTINO, J.-Case called-Adjd to 6-14-72 at 10:00 AM for trial.	
6/12/72	Pltffs' answers to deft's interrogatories & request for production (3rd set)filed.	23

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J. 370C 926 KOPPERS CO., INC., et al v. S & S CORRUGATED PAPER, etc.

CIVIL DOCKET

DATE	FILINGS—PROCEEDINGS	PLAINTIFF	DEFENDANT	AMOUNT RECORDED BY EMOLUMENT RETURNS
6/14/72	Before Costantino,j.-Case called & adj'd to 7/19/72 for trial			
6-20-72	Deft's Interrogatories Nos. 58 and 59, FILED.			24
7-19-72	By COSTANTINO, J.- Case called - Trial adjd to 10-2-72 at 10:00 A.M.			
8/15/72	Pltff's answers to deft's interrogatories (Nos58 & 59) filed.			25
10-2-72	Before COSTANTINO, J.- Case called - Trial adjd to 12-4-72 at 10:00 A.M.			
12/4/72	Before Costantino,J.-Case called & adj'd to 124/73 for trial			
1/28/73	Before Costantino,J.-Case called & adj'd to 2/5/73 for trial			
2-5-73	Deposition of pltffs filed.			26
2-5-73	Deposition of pltffs filed.			27
2-5-73	Deposition of pltffs filed.			28
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2-5-73	Deposition of Albert F. Shields filed.			30
2-5-73	Deposition of Mitchel Flaum filed.			31
2/5/73	Before Costantino,J.-Case called-Trial adj'd to 2/6/73			
2-6-73	Before COSTANTINO, J. - Case called. Trial ordered and begun. Trial continued to 2-7-73 at 10 A.M.			
2-7-73	Before COSTANTINO,J.-Case called -Trial resumed and cont'd to 2-8-73 at 10 AM			
2-8-73	Before COSTANTINO, J. - Case called. Trial resumed and continued to 2-9-73 at 10 A.M.			
2-9-73	Before COSTANTINO, J. - Case called. Trial resumed.Trial continued to 2-13-73 at 10 A.M.			
2/13/73	Before Costantino,J.- Case called-Trial resumed-Both sides rest-Trial concluded-Decision reserved			
5-16-73	Pltffs' post-trial proposed findings of fact and conclusions of law, and post-trial brief filed.			32/33
6-13-73	Letter from Robert C. Faber dtd 6-8-73 filed.			34
8-7-73	PROPOSED FINDINGS OF FACT AND CONCLUSION OF LAW FILED.			35
8-7-72	DEFENDANT'S REPLY MEMORANDUM. FILED			36
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11-29-73	By COSTANTINO, J.--Memorandum decision dtd 11-28-73 of the court's findings of fact and conclusions of law filed. Settle judgment on notice. (p/c mailed to attys.)			38
1-8-74	By COSTANTINO. J. - Memorandum and order dtd. 11-28-73 to amend page 17 of decision filed.			39

D. C. 110

Docket Entries

70C 926 KOPPERS CO et ano - vs. - S&S CORRUGATED PAPER MACHINERY

DATE	FILINGS—PROCEEDINGS	CLERK'S FEES PLAINTIFF	CLERK'S FEES DEFENDANT	AMOUNT REPORTED IN EMOLUMENT RETURNS
2-20-74	By COSTANTINO, J. -JUDGMENT dtd. 2-19-74 filed. (p/c mailed to attys) bf			40 J
3-19-74	Notice of appeal filed. Duplicate mailed to C of A & pltff. Jn			41 J
4-26-74	Stenographer's transcripts dtd February 6,7,8,9&13, 1974 filed.			42-46
4-26-74	Pltffs' post-trial reply brief filed.			47
4-26-74	Pltffs' pre-trial memorandum filed.			48

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW YORK

----------X

KOPPERS COMPANY, INC., and :

UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION : 70C 926

Plaintiffs :

v : Civil Action No.

S & S CORRUGATED PAPER MACHINERY CO. INC. :

Defendant :

----------X

COMPLAINT
DECLARATORY JUDGMENT ACTION FOR
PATENT INVALIDITY AND NON-INFRINGEMENT

Plaintiffs complaining of the Defendant's actions, state:

1. Plaintiff Koppers Company, Inc., is a corporation organized and existing under the laws of the State of Delaware, with offices and principal place of business located at the Koppers Building, Pittsburgh, Pennsylvania, 15219.

2. Plaintiff Universal Corrugated Box Machinery Corporation is a corporation organized and existing under the laws of the State of New Jersey, with offices and principal place of business located at 27 Commerce Drive, Cranford, New Jersey, and is a subsidiary corporation of Plaintiff Koppers Company, Inc.

3. Upon information and belief Defendant S & S Corrugated Paper Machinery Co. Inc., is a corporation organized and existing under the Laws of the State of New York, with offices and principal place of business located at 160 North 4th Street, Brooklyn, New York, New York.

4. This is an action for declaratory judgment under Title 28, United States Code Section 2201, for the purposes of determining any actual controversy between the parties as is more fully set forth below.

5. Jurisdiction and venue are based upon Title 28, United States Code Section 1338(a) and Section 1391(b) and (c) and on Patent Laws of the United States Title 35 United States Code.

6. Plaintiffs, in addition to other business activities, are engaged in the manufacture and sale of machines known as Universal underfeed stackers which are used in connection with devices for handling box blanks in the packaging industry.

7. Upon information and belief, defendant is the owner of United States Patent No. 2,988,236 (a copy of which is attached

hereto as Exhibit 1) which issued to Albert F. Shields on June 13, 1961 for an alleged invention entitled "Blank Stacking, Strightening and Delivery Device".

8. Upon information and belief, defendant is engaged in the business of manufacturing and selling devices of the type disclosed in said United States Letters Patent No. 2,988,236.

9. Upon information and belief, defendant has claimed that plaintiffs' Universal underfeed stacker machines are within the scope of defendant's patent No. 2,988,236, and has requested that sales of the Universal underfeed stacker machines be discontinued. In a letter dated March 30, 1970 (a copy of which is attached hereto as Exhibit 2) to Mr. Arthur B. Colvin, an attorney representing plaintiff Universal Corrugated Box Machinery Corporation, defendant's attorney, Mr. Jerome M. Berliner stated that plaintiffs' Universal underfeed stacker machines are within the scope of said patent and requested that plaintiff Universal Corrugated Box Machinery Corporation discontinue marketing its Universal

underfeed stacker machines, or colorable imitations thereof.

10. Upon information and belief, defendant has charged at least one of plaintiffs' customers with infringement of said United States Letters Patent No. 2,988,236 because of the customer's use of a Universal underfeed stacker machine supplied by plaintiffs. In a letter dated June 17, 1970 (a copy of which is attached hereto as Exhibit 3) to plaintiffs' customer Western Kraft Corporation of Portland, Oregon, defendant's attorney, Mr. Jerome M. Berliner charged said customer with infringement of said patent No. 2,988,236 because of said customer's use of Universal underfeed stacker machines supplied by plaintiffs.

11. Plaintiffs allege that their Universal underfeed stacker machines do not infringe any valid claim of said patent No. 2,988,236, and therefore, neither plaintiffs nor their customers have infringed defendant's patent.

12. Plaintiffs allege that said patent No. 2,988,236 is invalid.

13. An actual controversy exists between the parties hereto with respect to charges by the defendant that plaintiffs and their customers have infringed said patent No. 2,988,236, and with

respect to the validity and enforceability of said patent No. 2,988,236. This controversy involves and threatens the rights of plaintiffs and plaintiffs' customers to carry on their respective businesses concerning the sale and use of plaintiffs' Universal underfeed stacker machines, free of interference, obstruction, restraint and attempted monopolization by defendant.

14. Upon information and belief defendant's Patent No. 2,988,236, is invalid for one or more of the following reasons:

a) The subject matter is not operative or useful and did not promote the progress of any science or useful art.

b) The subject matter lacks invention or any patentable novelty.

c) The differences, if any, between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

d) The subject matter was known and was used by others in this country before the alleged invention or discovery thereof by the patentee.

e) The subject matter was in public use and was on

sale in this country prior to the alleged invention or discovery thereof by the patentee and for more than one year prior to his application.

f) The subject matter was patented and was described in one or more printed publications in this and in one or more foreign countries before the alleged invention or discovery thereof by the patentee and more than one year prior to his application.

g) The subject matter was abandoned by the patentee.

h) The patentee did not himself invent the subject matter.

i) The patentee was not the first inventor of the subject matter thereof, in that, before the alleged invention thereof by the patentee, any invention embodied in its subject matter was made in this country by another who had not abandoned, suppressed, or concealed it; wherefore, the patentee unjustly obtained the patent for that which was in fact invented by another, who was using reasonable diligence in adopting and perfecting the same.

j) The specification was made to contain less than the whole disclosure relative to the alleged invention or discovery.

k) The patent does not contain a written description

of the subject matter, and of the manner and process of making, constructing, compounding, and using it, in such full, clear, concise and exact terms as to enable a person skilled in the art or science to which it pertains or with which it is most nearly connected to make, construct, compound and use the same, does not explain the principle thereof, and the best mode in which the patentee contemplated applying that principle, so as to distinguish it from other inventions; and does not particularly point out the part, improvement or combination which the patentee claims as his invention or discovery.

l) The patent does not particularly point out or distinctly claim the subject matter or the part, improvement or combination, which he claims or regards as his invention. Without limitation of the foregoing, the claims are indefinite, ambiguous, uncertain, functional and unduly broad.

m) During the prosecution of the application new matter was introduced into the disclosure of the invention.

Defendant will be given notice by plaintiffs in writing of the patents or printed publications and of the names and addresses of the persons who were prior inventors or had knowledge of the alleged invention as

alleged in one or more of these paragraphs, at least 30 days before the trial hereof, in accordance with the provisions of Section 282 of Title 35 United States Code.

15. In view of the prior state of the art and the language of the claims of said patent and by reason of the proceedings in the United States Patent Office in the prosecution of the application, defendant is estopped to assert that the claims of its patent have such scope as to cover plaintiffs' Universal underfeed stacker machines.

WHEREFOR PLAINTIFFS RESPECTFULLY PRAY:

1. For a temporary and permanent injunction restraining defendant, its officers, agents, servants, employees, and attorneys, and all persons in active concert or under the control of defendant, from asserting or charging that the use or sale by plaintiffs or any of their customers of the Universal underfeed stacker machine constitutes an infringement of U. S. Patent No. 2,988,236.

2. That this Court decree U. S. Patent No. 2,988,236 is not infringed by plaintiffs or their customers.

3. That this Court decree U. S. Patent No. 2,988,236, to be invalid.

4. For the cost of this action and for reasonable attorney fees.

5. For such other and further relief as this Court may deem just.

Koppers Company Inc., and
Universal Corrugated Box
Machinery Corporation
Plaintiffs

Douglas W. Wyatt
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MU 7-8380

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

KOPPERS COMPANY, INC., and UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION Plaintiffs	
v.	Civil Action No. 70 C. 926
S&S CORRUGATED PAPER MACHINERY CO. INC. Defendant	

ANSWER AND COUNTERCLAIM

Defendant, by its attorneys, answers the Complaint in this Action as follows:

1, 2. Is without knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraphs 1 and 2 of the Complaint.

3, 4, 5, 6, 7, 8, 9, 10. Admits the allegations of Paragraphs 3, 4, 5, 6, 7, 8, 9 and 10 of the Complaint.

11, 12. Denies the allegations of Paragraphs 11 and 12 of the Complaint.

13. Denies the allegations of Paragraph 13 of the Complaint except defendant admits that an actual controversy exists between the parties hereto with respect to charges by defendant that manufacture, use and sale of the Universal underfed stacker machines constitute infringements of defendant's United States Patent No. 2,988,236.

14, 15. Denies the allegations of Paragraphs 14 and 15 of the Complaint.

COUNTERCLAIM

For its Counterclaim against plaintiffs, the defendant alleges as follows:

16. Defendant is a corporation existing under the laws of the State of New York, and having a principal place of business at 160 North Fourth Street, Brooklyn, New York.

17. The Complaint in this Action alleges that plaintiff, Koppers Company, Inc., is a corporation existing under the laws of the State of Delaware, and having a principal place of business at the Koppers Building, Pittsburgh, Pennsylvania.

18. The Complaint in this Action alleges that plaintiff, Universal Corrugated Box Machinery Corporation, is a corporation existing under the laws of the State of New Jersey, having a principal place of business at 27 Commerce Drive, Cranford, New Jersey, and is a subsidiary corporation of plaintiff, Koppers Company Inc.

19. That the jurisdiction and venue of this Court in this Counterclaim arises and is invoked under the patent laws of the United States, 28 U.S.C.A. Section 1338, and on the fact that the Counterclaim herein sets forth a Compulsory Counterclaim (Rule 13a F.R.C.P.) by the defendant against the plaintiffs in a Declaratory Judgment Action pursuant to Sections 2201 and 2202 of Title 28, United States Code.

20. Defendant is the owner by assignment of United States Patent No. 2,988,236 for an invention in "Blank Stacking, Straightening and Delivery Device", which patent was duly and legally issued on June 13, 1961.

21. Upon information and belief, plaintiff, Universal Corrugated Box Machinery Corporation, has infringed United States Patent No. 2,988,236 by making, using and selling blank stacking, straightening and delivery devices embodying, employing or containing the inventions disclosed and claimed in said patent within the United States, and will continue to do so unless enjoined by this Court.

22. Upon information and belief, plaintiff, Koppers Company Inc., is aiding and abetting its subsidiary, Universal Corrugated Box Machinery Corporation, in committing acts of infringement of United States Patent No. 2,988,236, and will continue to do so unless enjoined by this Court.

23. Prior to commencement of this Action, both of the plaintiffs herein have been advised that the Universal underfed stacker machines fall within the scope of defendant's United States Patent No. 2,988,236.

24. The infringements of United States Patent No. 2,988,236, complained of herein, by plaintiffs and each of them have been deliberate and have caused irreparable damage to defendant.

WHEREFORE, defendant prays:

(a) That the Complaint herein be dismissed and costs and reasonable attorneys fees be awarded and assessed against plaintiffs.

(b) That defendant be granted preliminary and final injunctions against further infringements of said United States Patent No. 2,988,236 by plaintiffs, their officers, employees, agents and all those in active concert, participation or privy with them.

(c) That this Court order an accounting of damages and profits resulting from the aforesaid infringement of United States Patent No. 2,988,236, and the payment to defendant of treble the amount of such damages.

(d) That such further relief as this Court may deem advisable be granted.

Dated: August 12, 1970

OSTROLENK FABER GERB & SOFFEN

By _____

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MU. 7-8380

(Filed October 13, 1970)

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

KOPPERS COMPANY, INC., and UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION Plaintiffs v. S&S CORRUGATED PAPER MACHINERY CO. INC. Defendant	Civil Action No. 70 C 926

PLAINTIFFS' REPLY TO DEFENDANT'S COUNTERCLAIM

Plaintiffs reply to defendant's counterclaim in this Action as follows:

1. Plaintiffs admit the allegations of paragraph 16 of defendant's counterclaim.

2. Plaintiffs admit the allegations of paragraph 17 of defendant's counterclaim.

3. Plaintiffs admit the allegations of paragraph 18 of defendant's counterclaim.

4. Plaintiffs admit the allegations of paragraph 19 of defendant's counterclaim.

5. Plaintiffs admit the allegations of paragraph 20 of defendant's counterclaim except that plaintiffs deny that United States Patent No. 2,988,236 is valid.

6. Plaintiffs deny the allegations of paragraph 21 of defendant's counterclaim.

7. Plaintiffs deny the allegations of paragraph 22 of defendant's counterclaim.

8. Plaintiffs admit the allegations of paragraph 23 of defendant's counterclaim except that plaintiffs deny that the Universal underfeed stacker machines are within the scope of the defendant's United States Patent No. 2,988,236.

9. Plaintiffs deny the allegations of paragraph 24 of defendant's counterclaim.

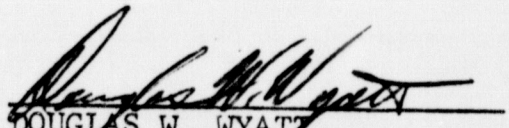
WHEREFORE plaintiffs respectfully pray:

(a) That defendant's counterclaim herein be dismissed.

(b) That plaintiffs be awarded costs and reasonable attorneys' fees.

(c) For such further and other relief as this Court may deem just.

KOPPERS COMPANY, INC., and
UNIVERSAL CORRUGATED BOX
MACHINERY CORPORATION
Plaintiffs



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S G FABER COPY

TRANSCRIPT OF PROCEEDINGS FEBRUARY 6, 1973

UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF NEW YORK

----------x

KOPPERS COMPANY, INC., and UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION,

Plaintiffs,

-against-

70-C-926

S&S CORRUGATED PAPER MACHINERY CO., INC.,

Defendant.

----------X

United States Courthouse
Brooklyn, New York

February 6, 1973
10:00 o'clock a.m.

B e f o r e:

HONORABLE MARK J. COSTANTINO, U.S.D.J.

BURTON SULZER
OFFICIAL COURT REPORTER

Appearances:

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New York, New York

BY: DOUGLAS WYATT, ESQ.,
ALBERT C. JOHNSTON, ESQ.,
-and-
BOYCE DENT, ESQ.,
Of Counsel

OSTROLENK, FABER, GERB & SOFFEN, ESQS.,
Attorneys for Defendant
10 East 40th Street
New York, New York 10016

BY: SIDNEY G. FABER, ESQ.,
-and-
JEROME M. BERLINER, ESQ.,
Of Counsel.

MR. WYATT: Your Honor, may I initially point out to the Court that the plaintiffs and defendant have reached a pre-trial stipulation in order to cut down the time of this trial. I have a copy here for your Honor and if I may read it briefly into the record, the only issues to be tried are the questions of validity, infringement and enforcibility of Claim One of the patent in suit.

There are five Claims in the patent in suit and we will only be concerned with Claim One.

Number two, in the event the suit patent is held invalid and/or not infringed as to Claim One thereof, plaintiffs are entitled to an injunction restraining defendant and all persons in active concert with defendant from asserting the patent in suit in any manner against plaintiffs or their customers in respect to the manufacture, use or sale of plaintiffs' Universal understackers.

Third, your Honor, is a question of attorney fees and amount of damages are to be deferred for later determination.

THE COURT: Yes, it will not be determined at this time. I understand that.

MR. WYATT: Fourth, photocopies of drawings documents and prior art patents are to be received in evidence in place of original drawings, documents and prior art patents, but remain subject to correction if error appears and being objected to on other grounds.

Would your Honor like an opening statement?

THE COURT: I think on this one I should have an opening statement.

MR. WYATT: Your Honor, the plaintiffs have submitted a pre-trial memorandum, and I will generally follow the outline that is set out there in my opening statement.

THE COURT: Make it short.

MR. WYATT: I will go through it rapidly.

Initially, your Honor, we point out that the claim in suit --

THE COURT: I think before we get into an opening statement, the record should indicate at this time that the Court with both attorneys appeared at both factories where these machines were working and watched the machine itself in operation, and likewise discussed the nomenclature of both machines at the time of the appearance with both attorneys. The Court has particular

knowledge of the appearance of both machines and their capabilities and what they do.

MR. BERLINER: I would like to point out that the S&S machine that you viewed does not correspond to the machine in the patent in suit. It was just exemplary of a certain type of underfeed stacker staightener that the defendant has manufactured.

THE COURT: The first machine I viewed was the one with the belt and the pusher.

MR. WYATT: Yes, your Honor. That was up at Saddle Brook, your Honor.

THE COURT: The other machine I viewed was the one that comes from the bottom and then the pusher is behind it and pushes.

You say the second machine I just spoke about, that is not the one involved in the infringement of the suit?

MR. BERLINER: No. The appearance of the machines, both of them, are quite difference from the appearance of the device illustrated in the suit patent. The first machine that you looked at that was an S&S machine at Enterprise, the defendant claims comes within the patent. However,

we do not claim that the second S&S machine you looked at comes within the patent. If you recall, the second machine had lifting belts. They were metal belts and we say that does not come within the patent.

THE COURT: All right.

MR. WYATT: I will make this as brief as possible.

Initially, we point out to your Honor that what is involved here is what is known as a combination claim, a combination claim as to a claim of a group of elements.

Here we have four elements involved: a conveyor with a pair of plates. The conveyor feeds the blanks under the stack and the stack is formed between the pair of plates. One of the plates is a slapper that slaps and straightens the stack. A third item is a pusher moving on top for removing the top of the stack, and the fourth element of this claim is a pusher that, s supported for limited vertical movement up and down as it's pushing, your Honor.

Just briefly, I would like to point out to your Honor the law concerning combination claims.

The Supreme Court has said in the leading case concerning combination claims the Court should scrutinize combination patent claims with a care proportioned to the difficulty and the improbability of finding invention in an assembly of old elements, and it is our position here that these are just four old elements assembled in a combination.

We have cited the fact that since 1968 the Supreme Court has not upheld the combination patent.

Claim One of the combination patent has a first element that's a conveyor and two plates, your Honor, and that is shown in one patent, an underfeed conveyor feeding into an underfeed stack that has two plates and that's the Greenwood patent.

Element two recalls a slapper that's movable longitudinally; and we in our brief will point out with our expert testimony how that particular device was old in the art.

The third element is a device to push off the top of the stack, and we will show your Honor that was old in the art.

The fourth, your Honor, is a pusher plate

that slides up and down on another plate and that structure was notoriously old, just mounting one plate on another and allowing it to slide up and down.

Going briefly into the question of the law concerning infringement of combination claims, in the International Latex case, which is the leading case concerning infringement of combination claims here in the Second Circuit, the Second Circuit quoted the case of Carl Braun versus Kendall-Lamarr Corporation, and here it says that "Infringement is not proved simply by the language used in a claim without regard to the specifications." In other words, your Honor, the claim has to be read and interpreted in light of the detailed nuts-and-bolts specification and that this is on page 12 of my brief. It must be proved by showing that the claims cover what is alleged to infringe when the claim is read in light of the specification.

Where, your Honor, the prior art is quite close, the patentee is limited to, if any, a very minor range of equivalents. Here we say they are unable to resort to the doctrine of equivalents and we set out what the Court said in

Deitel, which is a leading case in this Circuit as to what is equivalents, and here the Court stated on page 12 and 13: "Ordinarily we should not insist upon so slight a difference, but the invention is at best extremely narrow," and we claim if there is any invention here, your Honor, it is extremely narrow and we can see no grounds for resorting to the doctrine of equivalents and we argue, your Honor, in this case there can be no resort to the doctrine of equivalents, and we also point out the other leading case in this Circuit, which is Reiner v. Leon, where the Second Circuit reiterated its position: "However, we do not understand plaintiffs to argue that the doctrine of equivalents is applicable here nor could they, thus the prior art limits the scopes of plaintiff's claims and prevents a finding of equivalents," and our expert will point out to your Honor how this prior art limits the claims.

In addition to not being able to resort to the doctrine of equivalents, your Honor, the plaintiffs is estopped by what is known as the doctrine of File Wrapper Estoppel and this simply put is the doctrine of where a patentee goes to the

Patent Office and has his application rejected and then in order to overcome that rejection amends the claim, puts specific limitations in the claims, and when that happens, as pointed out in the leading case in this Circuit, which is International Latex, "However, we must look to the Patent Office history and, when we do, we find that even so modest an expansion of the claim by the doctrine of equivalents is precluded by File Wrapper Estoppel." And then going on, on page 15, the Court states: "It is settled that the rejection of a claim forbids 'any interpretation of those secured which leaves them identical with that rejected.'" In other words, once they amend the claim, your Honor, to that specific area, unless the alleged infringer does exactly that, they can't expand the claim beyond the specific area of novelty and that again, the Supreme Court set up that basic rule back in 1926 in ITS Rubber versus Essex Rubber, and then going on, your Honor, just bvery briefly, the history of the prosecution of the patent in suit, the application was rejected four times, your Honor, not just once or twice, but four times. The first rejection

was rejected because the Examiner couldn't understand it and it is still full of indefinite statements.

The second rejection, the Examiner rejected all the claims and said all of these expedients are within the skill of the average mechanic and did not produce any new or unobvious results.

Then again, in the third Office action, your Honor, the Examiner rejected it for a third time and went on to say almost the exact same thing, these expedients would be within the skill of the average mechanic.

Then, finally on June 27, 1960 -- and I am referring to page 17 of my pre-trial memorandum, your Honor -- the Examiner made a fourth and final rejection and in that rejection he stated that there may be certain novelty in it, and the Examiner said that there may be novelty in the vertical movement of the pusher plate so that the blanks can continuously accumulate, and he suggested certain language for the patentee to add to Claim One.

In addition to that, the Examiner suggested that the word "reciprocally" be inserted in Claim One

One to define the movement of the slapper plate. In other words, your Honor, rather than pivoting, the Examiner required them to have a reciprocal movement, for instance like the piston engine of an automobile, rather than pivoting.

Very briefly, your Honor, the reasons why we claim that we do not infringe the suit patent, in addition to the fact that we believe Claim One is invalid, is that Examiner required a restriction to the claim to a certain limitation, two of them; one, to repeat, the vertical movable pusher plate that removes the stack, and, number two, the reciprocally movable slapper plate, the longitudinally movable slapper plate which is reciprocal back and forth, for instance, in the manner of a piston engine.

We don't have these structures, your Honor, and we will point out to you why we don't have them. For one, our pusher only moves a short distance from five to seven inches and does not remove the top of the stack. There are vertical rolls on the side that actually pull the stack off.

We do actually know what's been done in the prior art. We displace the stack initially from

five to seven inches and then pull it off with pull rollers.

There are a number of other limitations, your Honor. For instance, our device does not operate in synchronism with an attached machine such as a folded lure.

In addition, your Honor, we do not have a pusher plate that operates periodically and in synchronism with the conveyor or with an adjacent machine and these are requirements of the claim which our expert will point out to your Honor.

Finally, your Honor, we would like to point out to you that the law as to infringement where the alleged infringer has merely used the elements in the prior art to build his machine -- and on that point, if I can find it here, the Second Circuit has set out the rule that generally, your Honor -- I don't find it, but if I may paraphrase the rule, that if an alleged infringing machine doesn't use the mechanism of the claim but uses what was well-known in the prior art to accomplish what was done by that element in the claim, there can be no infringement, and I have here, and I will point out to your Honor later the Second Circuit

rule on that.

Finally, as to the presumption of patentability of the patent in suit, this Circuit in Reeves Brothers versus U.S. Laminating finds that if there is more pertinent art that was not cited -- and we have some pertinent art here that was not cited -- the presumption of validity vanishes. In addition to that, even if there wasn't more pertinent prior art, this is the second rule on the presumption of validity. The statute does not require that the presumption be accorded the weight of actual evidence.

This Court recognizes the unavoidable obstacles to an accurate, impartial decision that is inherent in the ex parte proceedings in the Patent Office. The Examiner in the Patent Office examines it and all he has is the attorney arguing. There is no adversary proceeding.

Finally, the Court rules we cannot properly allow decisions of that Office, namely, the Patent Office, to alter the preponderance of the evidence on the question of validity.

THE COURT: All right.

MR. WYATT: If I may call my first witness --

I think you ought to hear the other statement.

MR. BERLINER: This is my partner, Sidney Faber, who will make the opening statement.

MR. FABER: Off the record.

(Discussion off the record.)

MR. FABER: Your Honor, while you have had all the reasons why the patent is not invalid, let us tell you first a very little bit about the history of this particular art and the reason for this patent, the background and a little bit about the patent and what we are going to try and prove.

As far as the applicable law is concerned, I think we will apply that after you have the facts so that you will have a framework within which the law is applicable.

When you make a box blank, you start out with a flat piece of corrugated cardboard that has come from a corrugator and you probably walked under or around a corrugator when you visited this plant.

All that the corrugator does is, in addition to making the board, which consists of an upper layer, a lower layer and a fluted or corrugated layer between, is make that combination from three

great big mill rows. Sometimes they use two or more mill rows and they make a double corrugator, flat surface, corrugated flat. The usual form of the corrugated board is these two flat surfaces with the flutes between.

Now, that board, as it comes off the corrugator, is stiff. It can't be rolled. You have to chop it to length as it comes off or otherwise you have to have a plant three thousand miles long and, so, there is a cut-off at the end of the corrugator that's arranged so that it will cut the right lengths, and that's something outside this patent, but it is preliminary.

In addition, the corrugator, because the board moves longitudinally, applies score lines in the desired place after the board is made, so at least you get your first bend line. That will determine your initial fold.

Then we get into a machine called a flexo-folder gluer tape and it should also be called a printer-slotter because it folds, it applies glue, it prints, it slots so that the flaps are formed, and you got a box coming out. It isn't an erected box. It's a flat tubular box and you saw that.

Then this box has to be treated in some way. A gluer has to set. The boxes have to be bundled and shipped over to whoever is going to use them.

So that's a general picture, and I might say that I have represented this client since 1936. I have learned a little bit about corrugators, and I have seen them all working. So I am not testifying as an expert. We have a better expert than I am here.

Now, previously to about 1954 or 1955 for interstate shipments there was a requirement that the boxes be sealed into the tubular form by either a tape or stitching, and, so, there were taping marks, and on the old folders we had a taping device that in effect licked the tape and put it on, or we had a stitcher on the end, it went brrr and stapled the thing together.

Now, the whole industry knew it was coming, that the ICC would permit the use of a glue lap, but there was a problem with a glue lap. When you stuck the tape on and it held both sides of the meeting edge, you could run that tape seam right under a pressure roll and get it set and stuck and certainly when you had a stitcher, it just put these

wire staples in right down the line; you had no problem.

1-3 But now when we had this little glue flap sticking out, very often it was crushed so that it wouldn't increase the thickness of the box. There was only these two glue surfaces, not three glue surfaces holding each other, and the boxes would fold very nicely and then they would open up. They would go on to a conveyor and become loose and so the problem became one of trying to figure out a way of keeping these boxes glued until they were finally set, and if the glue was a ten-second setting, you had to sit on them for ten seconds, and if it was a five-second setting, you had to sit on them for five seconds.

That's the origin of this particular device.

Knowing it was coming several years ahead, we were working on it, Al Shields was working on it, and finally came up with an operative device.

Now, what we have got here, as you have already seen, as has already been explained -- I will go through it very, very rapidly -- is a device which is coordinated or synchronized with the following machine, and the testimony will show

you no matter what claim the defendant makes -- it just better be coordinated or synchronized or a lot of bad things will happen, and we will bring that out.

The blank comes into the stacking device and you saw that, too. It comes in under the stack by hitting it at a slight angle so it can slide under, and that blank is under control at all times.

If you lose control of that blank, you lose control of your box, and the Heinz people or the Campbell people will send back a message that just can't be misinterpreted as to what went wrong with that box, and the testimony will bring that out.

So that box is under control as it leaves the folding section, stays under control as it gets into the stacking section.

Now, there is a plate there, it's got to get in under the plate, and now because of the fact that the box has just been folded by a very fast-moving pair of belts at about two hundred boxes a minute -- and these boxes, four feet or longer -- it can be shorter, too -- you are never sure that your glue lap came in right, so they go in past this plate and the plate gives them a wallop

individually, one after the other, against the flat surface, and you saw that, too, and now the stack keeps rising; there is a counter there, and at the right time, when you have got the twenty-five or thirty or the eighteen or whatever the customer wants them bundled as, the pusher comes along and knocks them off. So that men can tie them up and ship them.

Now, the reason I say that the box must be under control at all times is this, and the testimony will show that, too. Boxes are not made just to be boxes. They are made to contain things. They are made for an ultimate customer who is going to be able to use them, and this ultimate customer, such as a big packing plant, food packing plant, has got automatic machinery. If it's soups, he's got a cooker way back there and a lot of processes and those cans or bottles come out into a box and they have got to go in and if that box doesn't open right and those cans or bottles go all over the floor, then his whole automatic process right back to the cooker goes out, and if it takes ten minutes to clean up the mess and these plants do work, some of them, most of them, twenty-four hours a day, you

got a permanent loss of income plus a ruined, possibly ruined material.

Now, if that box isn't folded right and isn't exactly within tolerance and it's a little bit too small by as much as an eighth or a quarter of an inch, the cans or bottles won't go in and the automatic machinery closes down.

We have an instance where one of the S&S customers of a machine complained bitterly that he had gotten a kick-back from his packer, that on two or three boxes out of a double truck shipment of twenty thousand, the glue would run over and stuck the flaps together, the box didn't open, and there was a shut-down of more than a half an hour.

In other words, this is a kind of business in which you just have no bugs, zero bugs. The first bug you get, it just costs too much.

So you don't lost control of that blank. The folder doesn't do the job. It may do the job only nine hundred ninety-nine times out of a thousand. You can't afford that thousandth time.

Now, that's a little bit of the background.

Ordinarily when I try patent cases, I like to

to have the inventor here to tell his own story. This is something, I will get it on the record and there will be testimony under oath on it. I would like to have that part of the record closed up.

Al Shields was taken to the hospital last August. He was operated on for cancer. A lung was removed. He's under chemotherapy and X-ray therapy and totally unavailable. He knows he's got cancer. He doesn't know the extent of it, and we simply can't bring him here.

He's my contemporary, my friend, and I might be able to tell you something about it, but a lawyer isn't a witness, and we have got an officer of the company here who worked alongside of Al Shields since 1949 to tell you about it, and I'm coming to the invention.

The invention is obviously a combination. If I am an architect like Eero Saarinan, I take a nail and a couple of pieces of board and some window panes and slap them together in a brand new type of whole, I have made a building that never existed before, of a type that never existed before, and I have used nails, slats and wood and window panes.

You simply can't make an invention that is not a combination.

The essence, and one of the terrible jobs that this Court has to determine, is whether the combination is obvious; not is it obvious but was it obvious way back then, and that hindsight kind of job isn't a job that any Court should be afflicted with, but there it is, that's the law, and you have got to decide.

So to say that this is merely a combination patent is simply to say that this is the same kind of patent as the 2,988,235 patent before it, no different. Every patent is a combination patent.

The question, of course, do we have a novel combination? That's the issue, not is it merely a combination.

So we have here a stacking and scraping device, a conveyor comparable in synchronism with the device ahead of it.

We have something above the conveyor to intercept and accumulate the blanks. You saw the chimney there issuing from the machine, thereby forming a blank stack which is fed from below. Why? Because it's something above the conveyor.

The device includes a pair of plates transverse to the direction of motion. So the blanks move this way and the plates are transversed. That's clear. Between which the blanks may be accumulated. Clear.

One of the plates abutting the trailing edge, that's the edge that's moving away, of course, of the blanks in the stack is being periodically reciprocally movable in a longitudinal direction to play a straightening force to the blanks because it hits against the other one. There is an opening under the plate sufficient to permit the entry of at least one blank. Well, the blanks have to get into the stack.

Then there is a longitudinally movable plate for periodically pushing a top portion of the stack of the blanks from the accumulating device. It doesn't say all the way out or all the way across the room. Push it out.

Means for supporting the pushing plate that it remains in a substantially vertical position when in contact with the blank stack. You would rather that the blank stack came out straight than spill over.

Said pusher plate being mounted for limited vertical movement relative to the means for its support and the stack being fed with blanks as the movable plate is removing the top of the stack. That's the claim, you are going to hear the proof.

Now, we have been told that there were four rejections in the Patent Office, and that's terrible. I have also been in cases -- and you probably have read about them, too -- where the defendant's attorney, the accused infringer's attorney, says, "Good Lord, the Patent Office allowed this case without any action whatever, allowed it on the first action."

So I say you are hanged if you do and you are hanged if you don't. If the Examiner is careful, gives you four actions, says no, do it this way, I don't like this; do it that way, I don't like that, and finally comes up with a claim that's satisfactory to him, you've got four rejections and that's awful, and if the Examiner allows the case on the first action, he didn't make a search, he didn't do any work. Well, that is the defendant's position. It's a legitimate position for a defendant to take, and I have taken it, too, but from the point of view

of the owner of the patent and from the trier of the facts, the fact that the Examiner was careful and didn't just send it through to fulfil his quota but made searches and made searches again, made searches again and made searches again, should carry some weight. There is a presumption of validity in a patent. Of course that presumption only aids the owner of the patent in his initial proof. It's not a binding presumption, it isn't a hold-down presumption. It's one that can be overcome the moment that the defendant puts on an expert -- Koppers puts on an expert and says no, it's not novel for this reason, but there is that presumption. It doesn't exist as nothing at all, and when the Examiner worked so hard on the case, you have got yourself possibly a better presumption.

As far as pertinent art is concerned, prior art in the Patent Office is classified in something like three hundred seventy main classes, and a sub-class like Farrier will have seven sub-classes, a class like electronics will have six thousand. You will find the average sub-class having three or four hundred patents.

The Examiner is not supposed to cite all

three or four hundred in that sub-class. He picks out the best. If he has got a group of three, he picks the one that is the closest and he ends up, as in this case, citing quite a few. He could also cite forty, fifty or sixty, and when he cites forty, fifty or sixty or twenty or ten or five, the usual result is you have got an allowable case. If he has to pick from here, here and there, and start stitching together, then you have got a novel combination.

Now, I am sure I have omitted a lot, but I have tried to tell you the facts. The facts are what the laws apply to, and believe me we will give you the law when the time comes.

MR. WYATT: May we call our expert witness, Mr. Don Fischer.

(Continued on next page.)

D O N A . F I S C H E R , called as a witness on behalf of the plaintiffs, after having been first duly sworn by the Clerk, testified as follows:

DIRECT EXAMINATION

BY MR. WYATT:

Q Mr. Fischer, will you tell me where you reside, please?

A In Aspen, Colorado.

Q Will you give me, or would you please tell the Court, give the Court a brief history of your education and experience, please?

A Yes. I received a degree in engineering from Washington University in St. Louis, Missouri, in 1932 and I received a degree from the School of Law at Washington University in 1935.

Q Beyond that, Mr. Fischer, what did you do?

A In 1935 I entered the practice of patent law with a firm in St. Louis called Eilers and Schaumberg, and I continued to practice patent law until 1941.

In 1941 I went to Washington University and began as an instructor in electrical engineering, and I taught laboratory courses and theory courses in engineering, and then in approximately 1946 I was made assistant dean of the

School of Engineering and also an assistant professor and then, as time went on, approximately 1950, I was made head of a newly formed Department of Industrial Engineering, which was to cover such things as production processes, time and motion studies, manufacturing processes, cost accounting for manufacturing processes, and such things as that, and I was also made an associate professor of that Department.

Then in approximately 1955 I was made dean of the School of Engineering. At that time the School had approximately sixty-three or sixty-five teachers, and the number of students varied over the years, of course, from a thousand to a hundred.

Q That was at Washington University?

A This was all at Washington University.

Q What were the courses offered at Washington University?

A We offered courses when I was dean -- we had Departments of Electrical Engineering, Mechanical Engineering, Civil Engineering, Chemical Engineering. We had Engineering Science and we had Computer Sciences, and Department of Mechanics and, of course, a Department of Drawing. These were all under the dean.

I was dean until 1965. In 1965, somewhere during that time, I was made a professor of engineering science.

From 1965 until the present time I have done consulting in Aspen, Colorado. I obtained a leave-of-absence in 1965 and was on a financial arrangement with the University until 1969 and, of course, during the time that I was at the University, I did consulting work because it was the policy of the University at that time to require people who were teaching such things as engineering and medicine also to do some practical work so that they could -- the University felt they could better then teach the courses and I did consulting work in the field of mechanical and electrical engineering, and this also included testifying in patent cases because some of the courses I later taught involved patents.

Q Mr. Fischer, can you tell me, have you ever testified as a expert witness in other litigation, and if so, would you give the Court just a brief explanation of what your experience has been?

A Yes. I began in about 1946 to testify in patent cases and since 1946 I have testified in approximately seventy cases, patent cases, and of course to do that I have had to read all the histories and all the patents, hundreds and hundreds of patents, and look at many practical installations of the devices and all the testimony has been in Federal Courts.

THE CLERK: Document marked as Plaintiffs' Exhibit 1 for identification.

(So marked.)

MR. WYATT: The copy of the Shields patent in suit, Patent No. 2,988,236 has been marked as Plaintiffs' Exhibit 1 for identification. I offer this copy of the patent in evidence.

MR. FABER: No objection.

THE COURT: All right. Mark it in evidence.

THE CLERK: Plaintiffs' Exhibit 1, previously marked for identification, marked in evidence.

(So marked.)

Q Can you tell me what preparation you made for this trial?

A Yes. I studied the patents, the patent in suit and I studied the references cited by the Patent Office as well as a history of the prosecution of the patent through the patent and then I studied also the references cited by the Universal in addition to the references cited by the Patent Office.

Q By that you mean references cited, that will be cited in this litigation by plaintiffs when you say "Universal"?

A Yes.

Then I visited in April of 1972 an installation in Weekridge, Colorado where they make boxes for the Coors Brewery, I visited an installation where I saw a Universal stacker and then in October of this year I visited the plant of the Henckens Company, and I believe it was in Union, New Jersey.

MR. WYATT: That's the same plant that your Honor visited.

THE COURT: That I went to, yes.

A I also visited the plant of Universal and that was at Cranford, New Jersey, and in both places I was able to make measurements on the machines and also to, of course, see them operate and at the Universal plant in Cranford I asked that some picture be taken and then, in addition to that, I worked on the preparation of the charts that we have here.

MR. WYATT: May I have your Honor's permission to set up these two stands and to examine Mr. Fischer over here?

(Continued on next page.)

Q Mr. Fischer, I refer you to Plaintiffs' Exhibit 1, which is the Shields patent in suit, and I ask you if you will explain this patent --

THE COURT: I think we should mark those for identification as 1-A and 1-B since they are to enlargements of 1 itself.

MR. FABER: May I suggest that they be marked in evidence. It's all right with me, but I would like to have copies of the color chart.

THE COURT: Could you copy one of the small items he has?

MR. WYATT: We can work that out.

THE COURT: You want those in evidence?

MR. FABER: Yes.

THE COURT: Mark those 1-A and 1-B in evidence.

THE CLERK: Charts marked in evidence as Plaintiffs' Exhibits 1-A and 1-B.

(So marked.)

MR. WYATT: We offer these two patent diagrams. One is Figure 1 of the Shields patent, which has been marked as Plaintiffs' Exhibit 1-A and Figure 2 of the patent drawing of the patent in suit, which is marked as Plaintiffs' Exhibit 1-B.

We offer these in evidence, your Honor.

THE COURT: They are in evidence.

(So marked.)

BY MR. WYATT:

Q Mr. Fischer, will you please explain to the Court --

THE COURT: Would you step down, please.

Q -- with reference to the two patent drawings marked as Plaintiffs' Exhibits 1-A and 1-B?

A Referring now to Exhibit 1-A, which is sheet 1 of the 2,988,236 patent to Shields -- the explanation is going to be made much easier since your Honor visited the plant and saw the general purpose of these machines, so I won't dwell on that.

The patent shows roughly at first a conveyor, a stack where the blanks accumulate and a pusher to push blanks off the top of the stack.

In getting down to the details, 10 is the power wheel that drives all the other wheels and that operates the whole mechanism, and it is stated in the patent that this power wheel also is synchronized with another machine, which is not shown in the patent, and the other machine would be to the left of Figure 1.

Then the blank is number 30, and you can see that a

blank is coming in on the conveyor 37 and that blank shoots in under the stack of other blanks 32.

These are the blanks 32 are accumulated between the plate 57 and another plate 20. The plate 20 moves back and forth and the patents says longitudinally, that is, in a linear direction. It reciprocates in a linear direction, in the same direction that the blanks are coming in to the machine.

And 20 prime in the Exhibit 1-A shows the new position of the plate 20 as it goes back and forth. As the blanks gather, and the height of course increases, and on the top we have a pusher plate 92.

This pusher plate is colored pink in the drawing, and it is supported on a support member 90. The suppoer member 90 is arranged on -- it looks like two bicycle chains, one above the other, and this is arranged so that member 90 is held vertically all the time and actually as it goes around -- as the chains move, this plate 90 goes over to the right, then it is raised up, and then it comes back to the left, and then it is lowered again and then it proceeds to the right again so the --

THE COURT: That was the first machine I looked at in Cranford.

MR. WYATT: That is the defendant's machine,

the patented type they claim.

THE COURT: I viewed it.

MR. WYATT: Yes, sir.

THE WITNESS: And so this, the chains rotate, and this member 90 actually moves around this sort of elongated circle, you might call it, so that it goes back and forth and it lifts up and down.

This plate 92 is fastened on the front of the member 90 and this is shown pink, 92 is pink.

Now, if you look over on Exhibit 1-B, which is sheet 2 of the patent, that has been colored so you can see how the pink or member 92 is supported on the member 90. It has some rollers, 105-A, 105-B, 105-C and 105-D, and these rollers grip the member 90 so that the plate 92, which is colored pink, can slide up and down on the member 90.

Now, they added, in one of the Office actions, lugs 150, 151, 152 and 153. The lugs 150 and 151 are on the member 92. They are colored pink.

The lugs 152 and 153 are on the member 90 and they are colored orange. The purpose of the lugs is so that the weight of the plate 90 won't

let it just drop off. So they hold it on and the little -- the blue colored washers keep it on properly.

THE COURT: On the track.

THE WITNESS: And the purpose of this is so that the plate 92 can slide up and down.

This member 90 goes to the right and up and around and then down and then to the right again so it keeps going around the support -- 95, for instance, follows the path of the top chain and the support 94 follows the path of the bottom chain. This keeps running, and the patent states that this machine runs in synchronism with another machine over here on the left, which would be the gluer. And it has to do that because if they want to remove a certain number of blanks, the machine that is furnishing the blanks has to run in synchronism with this removing plate 92.

BY MR. WYATT:

Q May I just interrupt you for a second, Mr. Fischer.

In your previous explanation I don't think you indicated to the Court that what drove this conveyor down here 37, whether or not that was also driven by --

THE COURT: I understand that. It is driven by the main wheel.

THE WITNESS: The wheel 10 drives everything.

THE COURT: Without that main wheel, nothing moves.

THE WITNESS: That's right.

Q Proceed.

THE WITNESS: If you were producing here two hundred blanks a minute -- if they were shooting out of this machine, for instance, two hundred blanks a minute --

Q Does the patent refer to two hundred blanks a minute?

A No, I am just taking an average figure of what I saw on the machine's operation.

If there were two hundred blanks a minute, this --

THE COURT: The speed of this machine can be controlled, it can be two hundred blanks a minute, a hundred blanks a minute. It is a question of what they use it for.

THE WITNESS: So they -- I am using two hundred blanks a minute because one machine I saw, Universal machine, did two hundred and twenty a minute at the Coors Brewery. The one at Henckens

did a hundred and eighty, so it is for average I say two hundred.

If this man is making two hundred blanks a minute, the machine on the left not shown here, two hundred blanks a minute, and you wanted to put twenty-five in a bundle, then this plate 92, which is supported on the pivot 94, has to get around to its new position every one-eighth of a minute. So every one-eighth of a minute it gets here. So it is, as the patent says, periodically operated.

If you want to change the number in a bundle in this machine you have to do one of two things, you have to get into the gear box here and change the gears so that you change the time of this plate with respect to --

THE COURT: Don't they have button controls for that? Is my recollection correct?

THE WITNESS: Not in this patent. In the Universal machine, which I will point out later, it uses a counter and it counts them. On this machine, there is no counter. It does it, in my opinion, another way, because it does it by being synchronized with the machine over here.

If this machine over here misses some blanks, if it missed four blanks, for instance, this thing would still push off the top a bundle with the wrong number in it, because there is no counter on this machine. This is based on the idea of a periodic operation of the pusher plate. This pusher plate goes -- is above the plate 20 and above the plate 27 and the pusher plate moves completely across the stack from one end of the stack to the other, and as the pusher plate goes across the stack, it removes the top part of the stack completely by itself.

BY MR. WYATT:

Q What is happening during that time? You mentioned two hundred feet a minute. Would you explain to the Court what would be happening here?

(Continued on next page.)

THE WITNESS: I mentioned two hundred blanks a minute coming from the machine on the left and during the time that the pusher plate is moving from the left to the right on Exhibit 1-A, about approximately nine blanks have shot in underneath th stack so as the patent points out, this is the reason why they have the plate 92 movable vertically so that while in -- in my example, while the nine blanks are shot in underneath the plate 92 can raise up and allow the nine blanks to come in. So that's why the plate 92 is movable.

Now, I believe that there are certain adjustments I did not cover, becuase I don't think it has much to do with it. The wheel 63 can be turned to take care of different sizes of boxes, but I don't think we need go into that.

One other thing, 102 and 103 are said in the patent to be hold-down rods. I really have been unable to find out how they work. I mean, this doesn't show, but I'm not -- I don't think that we need to go into that, either.

THE COURT: All right. Let's take a five minute recess.

(Recess taken.)

(After recess.)

MR. WYATT: Your Honor, this is a clean soft copy of the patent for your Honor's records, PX 1.

(The witness resumed the stand.)

THE COURT: All right.

BY MR. WYATT:

Q Mr. Fischer, have you finished describing the operation of the device of the patent in suit?

A Yes.

MR. WYATT: If your Honor has no questions on this, your Honor, I will proceed to having Mr. Fischer describe some of the prior art for your Honor.

THE COURT: All right. I have no questions in this area.

MR. WYATT: Will you mark as Plaintiffs' Exhibit 2 the plaintiffs' book of prior art patents?

In that book, inside the cover page, your Honor, are a list of twenty-three patents that we will rely on. For your Honor's convenience, this is a duplicate of Plaintiffs' Exhibit 2 (handing).

I have a copy for you, Mr. Faber.

THE CLERK: Document marked as Plaintiffs' Exhibit 2.

(So marked.)

MR. FABER: If you want to put them in evidence, I don't object.

THE COURT: Put them in evidence.

MR. WYATT: We offer Plaintiffs' Exhibit 2, which is the plaintiffs' book of prior art patents, in evidence, your Honor.

THE COURT: All right, it is in evidence.

THE CLERK: Marked in evidence.

(So marked.)

BY MR. WYATT:

Q Mr. Fischer, I ask you to review for the Court, if you would, please, briefly some of the more pertinent prior art patents.

Initially, I refer you to the Greenwood patent, which is in Plaintiffs' Exhibit 2, and it is marked No. 8.

MR. WYATT: Your Honor, it is prior art reference number 8 in the prior art book.

THE COURT: Greenwood.

MR. WYATT: We have a blow-up of this, your Honor, of the Greenwood patent.

If you would like that marked, we can.

THE COURT: Mark that 2-A.

MR. WYATT: Would you mark as Plaintiffs' Exhibit --

MR. FABER: Why don't we mark the whole group 2-A?

MR. WYATT: There are going to be separate items, your Honor.

THE COURT: Separate prior art items?

MR. WYATT: We have blow-ups of other patents, also.

THE COURT: Mark that 2-A.

MR. WYATT: For the record, then, the blow-up of the Greenwood patent drawing will be marked as PX 2-A, please.

THE CLERK: So marked.

(So marked.)

MR. WYATT: We offer that in evidence, your Honor.

MR. FABER: That is in evidence?

THE COURT: Yes, in evidence. There is no reason for it to be for identification at all.

THE CLERK: So marked in evidence, your Honor.

(So marked.)

THE WITNESS: Referring to the Greenwood patent, and I am talking from Exhibit 2-A, which is an enlargement of 1,868,384, it is a stacking machine for blanks that have been operated on by another machine over to the left of it, and it states in Column 1 of the patent, on page 1: "This invention relates to a machine designed to automatically stock box blanks of paperboard as they issue from machines which operate upon the blanks." And you can see rollers B and B-prime and they belong to the other machine.

Then this machine has a conveyor belt and you can see a blank labelled D and the blank D is being underfed to the stack D, and D is the stack and the stack is held in place by a plate 21.

THE COURT: Is there a pusher on that, too?

THE WITNESS: There is no pusher, no, sir. It doesn't have the pusher.

THE COURT: All right. I understand.

THE WITNESS: So that I think explains Greenwood.

BY MR. WYATT:

Q Could you tell me what this next blow-up is?

MR. WYATT: I note on the top it is the Ward

patent, your Honor, which is in the prior art book as No. 19.

Will you mark the blow-up of the Ward parent drawing as 2-B, please?

THE CLERK: So marked.

(So marked.)

MR. WYATT: We offer that in evidence, your Honor.

THE CLERK: 2-B in evidence.

(So marked.)

THE WITNESS: The Ward patent shows an understack also. You can see the blanks coming in numbered 1, and they come under a stack also numbered 1 -- 1 is the number used for the blanks, really, but they come under a stack, and there is a plate they come up against, 6, a stop, and also they come under a plate 78, which you might say is a plate on the trailing edge.

THE COURT: The straightening edge.

BY MR. WYATT:

Q Does the Greenwood patent also have that opening under the plate on the trailing edge that we just referred to?

A Yes, it does. Right. So this Ward patent shows

substantially what Greenwood shows.

MR. WYATT: Amongst others.

I ask to have marked as Plaintiffs' Exhibit 2-C a blow-up of the Evans patent.

Your Honor, the Evans patent is in our prior art book and it is marked No. 7.

THE COURT: All right.

MR. FABER: What figures are in Exhibit 2-C?

MR. WYATT: That is Figures 4 and 5 of the Evans patent.

MR. FABER: That is the only portion of the patent that is marked 2-C?

MR. WYATT: Yes, sir.

THE WITNESS: I believe that those are Figures 3 and 4 on 2-C.

Q Would you explain the significance of the Evans patent to the Court, please?

A The Evans patent shows a stack of material indicated by the letter A, and this stack of material is on the base B, and -- and 22 is a spanker and it is pivoted up at 22-A, and this spanker vibrates back and forth and in doing so it straightens the stack of material.

So Evans, among other patents, is one that shows the use of a spanker to straighten materials.

Q Will you explain to the Court the significance of the Spiess patent?

MR. WYATT: We do not have that blown up, your Honor, but at this point the Spiess patent in our prior art book is marked as No. 16.

THE WITNESS: The Evans patent does not mention straightening the actual box blanks if they are glued wrong or if they are folded wrong. It mentions "make the stack straight."

Actually the Spiess patent, which is Patent No. 2,637,251 --

Q 251?

A 2,637,251. The Spiess patent indicates that during a final aligning operation they are able to straighten the blanks if the blanks should be missed -- I am going to use the term "mis-glued."

This is the problem that was spoken of in one of the opening statements. The Spiess patent shows, on Column 5, Line 44 is the important part -- it says: "This final aligning operation adequately removes any misalignment in the edges of the box blanks that has not previously been corrected by rolls 121, 121. For this purpose I employ a reciprocating blade 150 which is pivotally mounted on shift 151 by means of angle brackets 152 and 153. The blade

150 is caused to reciprocate transversely about 140 by means of an eccentric 154. . ." --

Q Mr. Fischer, may I interrupt you for a second.

MR. WYATT: Your Honor, this is the Spiess patent, which is No. 16. If you will turn to Column 5 in there --

THE COURT: That's what I want to see.

MR. WYATT: No. 16, Column 5.

If you will come down -- the left hand side of Columns 5 and 6, about two-thirds of the way down, beginning at Line 45, Mr. Fischer has just referred to that. This is the final aligning operation.

THE WITNESS: I have just read to where -- the part I read describes how it finally aligns any misalignments in the folded box blanks and it says: "eccentric 154 is connected to plate 150 by eccentric strap 156, which is pivotally secured to a backing plate 157 on the blade." But the part that I read points out that by a reciprocating blade hitting the blanks, the blanks themselves can be straightened if they were glued wrong.

Then on Column 6, it goes on to state at the

the top of Column 6: "The proper measure for completing the adhesion between the glued flap 57 and the cooperating edge of the folded blank is obtained by means of a floating pressure belt 162 mounted on rollers 163 and 164."

BY MR. WYATT:

Q Mr. Fischer, would you please point out using the drawings in the Spiess patent, would you please point out to the Court just what spanker plate you were referring to in that description, if you would?

MR. WYATT: It is not this one, your Honor, this is another patent. It is similar to this, and that Spiess patent in there, which is marked No. 16.

Q If you will tell the Court just where that is, Mr. Fischer?

A Reciprocating blade 150 is referred to on Column 5. Then we have to look in the drawings and find reciprocating blade 150.

MR. WYATT: If you look at Figure 7 on the drawing, your Honor, which is in from the front page, the fourth page in from the front of Spiess, Figure 7 on the left hand side, your Honor, you will see a pivoting spanker 150.

Q Would you explain that to the Court?

A The pivoting spanker -- you can see if you look at the number 155 to the left of that spanker, it is an eccentric, so it makes the spanker go back and forth and it hits a stack and the stack here is just shown as 29, though it looks like six bricks there. That is the stack.

So the spanker hits the stack and straightens out the -- any misalignment that is in the folded box.

In Figure 8, they have an enlarged view and you can see there 150 is the spanker that is pivoted, and it goes back and forth because of that eccentric 155. Then it is hitting 29 and --

THE COURT: I don't have Figure 8.

THE WITNESS: I'm sorry, sir.

THE COURT: Figure 9.

THE WITNESS: 8 is right below Figure 7. It is sort of mixed up in the drawing.

THE COURT: I have it.

THE WITNESS: Figure 8 is sort of an enlarged view and it is sort of mixed up in Figure 7.

THE COURT: It is.

THE WITNESS: There that reciprocating blade hits the edge of the box, blank 29, and that

is so that if the box is misglued, it will straighten it out.

Spiess then shows the idea of using a spanker -- in this particular case, it is a pivoted one -- to straighten out any misalignment of the box blank.

Q Of the glued box blank, is that right?

A Of the glued box blank.

And Spiess also realizes that he needs some pressure on the glue after he straightens it out, so he says he has a roller to put pressure on the glue.

MR. WYATT: Your Honor, we bring to your attention that the Spiess patent is entitled Glued Flap Box Folding Machine, that is specifically goes to the gluing aspect of it.

THE COURT: I see that.

Q Would you go on, Mr. Fischer?

MR. WYATT: Would you mark as the Plaintiffs' Exhibit 2-D a patent drawing of the Hart patent.

The Hart patent, your Honor, is in our prior art book and it is No. 4 of the prior art book.

THE CLERK: So marked.

(So marked.)

MR. WYATT: We offer in evidence Plaintiffs' Exhibit 2-D, the patent, blown-up patent drawing of the Hart patent, your Honor.

MR. FABER: No objection.

THE COURT: All right, received.

THE CLERK: So marked.

(So marked.)

THE WITNESS: I am going to refer to Figure 13 of that patent, and that is what 2-D is, it is an enlargement of Figure 13, and 13 is almost at the end of the drawings, your Honor. I think it is about the last drawing.

MR. WYATT: It is nine back from the front, your Honor.

THE COURT: I have it.

BY MR. WYATT:

Q Figure 13 shows a machine which has in it a stack of -- in this particular case it is a stack of leather pieces instead of cardboard, and this stack of leather pieces goes up the center of the machine and there is sort of a trough, a vertical trough -- It is a magazine?

A Right. And this magazine is indicated by the numeral 80.

Q Is this an underfeed stack, Mr. Fischer, that

is rising upwardly?

A Right.

Actually, what happens is you cut out a bunch of pices of leather at the bottom, and that forces the leather up the stack, and then this machine has a -- it does two things, not only does it remove from the top of the stack a selected number of pieces, but as it removes them it turns them on edge so it is easier for the people that pick them out of the trough.

So as the stack goes up to the top, there is a shoe or a plate 58 and it is operated by rod 120, and that is operated by a bunch of other mechanism over on the right.

When it is desired to remove the bundle, this shoe 58 pushes the bundle off the top. As it is pushed, it has a little refinement, as it is pushed off the top, it is also turned on its side so they are pushed off the top and then also at the same time turned on its side. So Hart shows the idea of pushing off the top of a stack of material.

Q Would you tell us, are there any other patents that you are aware of that show an underfeed stack where there is a push-off on the top?

A Yes.

Q Would you tell the Court about that?

A Yes.

Q I refer you to the Hess patent.

MR. WYATT: Your Honor, Hess is No. 13 in the prior art book.

Q In particular, if you would explain the operation of Figure 1 of that Hess patent, Mr. Fischer?

A In Figure 1, the Hess patent is a billetating for billets of steel, and they are indicated in the middle there, you can see them, little squares, and they are numbered 25.

As the billets rise, at the top you can see a rod 41, and it has a little stob on the end of it, and when they get up to the top the rod pushes them off the top of the stack and then you feed in at the bottom of the stack -- you can see 25 -- the little billets.

Q What is it that you feed on -- I notice 29, what would that be?

A A conveyor underneath, and you knock them off top.

MR. WYATT: We ask to have marked as Plaintiffs' Exhibit 2-E a blow-up of the patent drawing in the Sheppard patent, your Honor. The Sheppard patent is in your Honor's prior art book as item No. 9.

THE CLERK: So marked.

(So marked.)

MR. WYATT: And we offer that blow-up of the

Sheppard patent, Plaintiffs' Exhibit 2-E, in evidence, your Honor.

MR. FABER: No objection.

THE COURT: All right.

(So marked.)

THE WITNESS: 2-E is Figure 1 of the Sheppard patent, No. 2,135,773. It is here just to show that what I called a double bicycle chain movement in the Shields patent, that type of movement was shown in Sheppard where they have, you might say, the double bicycle chain, one above the other, and then they have a bar having the top fastened to the top chain, and the middle fastened to the bottom chain of the bottom chain, and this makes a shoe or a plate 1, removes stuff from a platform which is shown in dotted lines and push it onto a conveyor.

So this shows the movement, a known movement mechanically.

Q Mr. Fischer, I notice that there is a dotted line here and I notice from the bottom of that portion the lines is straight from the left hand side to the right hand side.

Will you describe what the significance of that

horizontal movement from left to right is and what the attitude of that pusher plate is during that movement?

A Well, the pusher plate, this dotted line shows the path of the pusher plate and it is, as I described in the Shields patent, it moves from left to right and then it rises up and moves from right to left and then it comes back and starts the cycle again.

Q Is that plate held in a vertical position, Mr. Fischer, from the time it moves from the left to the right?

A Yes. That's why they have two chains. If they just had one chain, it could pivot, but with two chains it's held vertical.

Q Is that the same way --

THE COURT: The principle would be the same, you are saying, as in Figure 1 here?

THE WITNESS: Exactly.

THE COUFT: I understand that.

MR. WYATT: The point I am emphasizing, your Honor, is that it is moved here, it is held in a vertical position.

THE COURT: I understand that.

MR. WYATT: Would you please mark the next blow-up as Plaintiffs' Exhibit F. This is a blow-up of a portion of the Krank patent and a portion of the

Jamieson patent.

We offer that blow-up in evidence, your Honor, as 2-F.

These patents, your Honor, in your prior art book, the Krank is No. 14 -- we will talk about Krank first, your Honor, No. 14, if we may.

THE COURT: Talk about Figure 4, I suppose.

MR. WYATT: Yes, your Honor.

Q Will you explain the significance of Figure 4 of the Krank patent, Mr. Fischer?

A Yes. These patents just show --

Q Confine it to the Krank patent, if you would, that's what his Honor has open in front of him now.

A The patent just shows that you can have a sliding plate in front of another plate.

MR. FABER: I thought you were talking about Jamieson now. You are on the other one? Would you identify it?

MR. WYATT: We are talking about the Krank patent. You have a copy of our prior art book, and Krank is listed in there as No. 14, Mr. Faber.

THE WITNESS: The 283 patent to Krank merely shows that you can have a plate on the front of another plate. 26 is a plate, and on the

top of that plate 26 --

THE COURT: We are going to have to suspend with this. We have a Jury verdict.

You can go out to lunch and then come back.

(Luncheon recess taken.)

I N D E X

WITNESS	Direct
DON A. FISCHER	28

E X H I B I T S

PLAINTIFFS'	DESCRIPTION	FOR ID.	IN EVID.
1	Patent No. 2,988,236	31	31
1-A	Chart		33
1-B	Chart		33
2	Book of Prior Art Patents	43	43
2-A	Greenwood prior art, blow-up	44	44
2-B	Ward prior art, blow-up	46	46
2-C	Evans prior art, blow-up	47	47
2-D	Hart prior art, blow-up	52	53
2-E	Sheppard prior art, blow-up	55	56
2-F	Krank & Jamieson prior art	57	57

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UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF NEW YORK

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KOPPERS COMPANY, INC., and UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION,

Plaintiffs,

-against- 70-C-926

S&S CORRUGATED PAPER MACHINERY CO., INC.,

Defendant.

----------x

United States Courthouse
Brooklyn, New York

February 7, 1973

B e f o r e:

HONORABLE MARK J. COSTANTINO, U.S.D.J.

BURTON SULZER
OFFICIAL COURT REPORTER

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THE CLERK: Civil cause on trial, Koppers Company vs. S&S Corrugated Machinery Corp.

THE COURT: Proceed, please.

MR. WYATT: Your Honor, may I proceed?

THE COURT: Go ahead.

MR. WYATT: Yesterday I believe we left off with Mr. Fischer describing to your Honor the functioning of the last element that we were describing in the prior art, and as shown by the patent to Krank, which was shown in the plaintiffs' prior art, plaintiffs' book of prior art, marked as Plaintiffs' Exhibit No. 2, and the Krank patent is marked as No. 14 in that exhibit.

D O N A. F I S C H E R, having been previously sworn by the Clerk of the Court, resumed the stand and testified further as follows:

DIRECT EXAMINATION

BY MR. WYATT (Cont'd):

Q Would you go ahead and explain the operation of that to the Court, please?

A Referring to Exhibit 2 of where the Krank patent

is shown on the top, the Krank patent was a support 26, it is a supporting plate, and on that supporting plate is an extension plate 28, which is loosely bolted to 26 so that when this plate 26, for instance, moves to the left and they hit this little hill --

Q That is to the right as you view it.

A I'm sorry, to the right. When they hit this little hill "D" the extension plate 28 raises up. In other words, the extension plate is loosely fastened to the plate 26 so that as it goes along its surface, it can raise and lower.

Q Does it act as a pusher plate?

A And it acts as a pusher plate. In this case they are pushing popcorn around a popcorn machine.

MR. WYATT: Your Honor, that concludes our brief description of the prior art at this point.

If I may have your Honor's permission, I would like to interrupt Mr. Fischer's testimony at this point to have a witness describe to your Honor the function and structure of the plaintiffs' devices, for two reasons, your Honor. I think it will be better, and Mr. Fischer can come back

later and explain why the patent, in our opinion -- in our position why it is invalid, and in addition, this witness has a regular job and we have taken him away from his normal employment.

THE COURT: Any objection from the other side?

MR. FABER: No objection.

MR. WYATT: We would like to call Mr. William Pulda.

W I L L I A M F R A N C I S P U L D A ,

called as a witness, having been first duly sworn by the Clerk of the Court, testified as follows:

DIRECT EXAMINATION

BY MR. WYATT:

Q Mr. Pulda, would you state your present home address and you present employment?

A 35 Waverly Drive, Edison, New Jersey.

I presently have my own consulting business.

Q At one point, were you employed by plaintiff Universal?

A Yes, between the years 1955 to April, 1971.

Q Would you just very briefly review your education and your prior employment, including your employment at Universal, for the Court, please?

A I am a graduate of Rutgers University Extension Division and hold a certificate in mechanical engineering.

Prior to being in my own consulting business, I held the title of chief engineer at Universal for three years and prior to that time, I was assistant chief engineer.

My total employment time with Universal was about 16 years.

Q Can you tell me, have you had any connection with the development of the Universal understacker?

A Yes, sir, I did.

Q Would you explain briefly to the Court how Universal came to develop an underfeed stacker?

A During the year 1965, there were discussions held on the development of a piece of equipment that could be used with our folder gluer, as well as other folder gluers presently on the market.

There seemed to be a request from customers to develop a piece of equipment that could be used and would require less floor space than the present

equipment being used.

After going through some preliminary market studies, it was decided to go ahead with some of the preliminary design work and sketches to see whether a machine of this type would be feasible.

Q And did you go ahead and build an under stacker?

A After the decision was made to actually go through the design work, we produced an under stacker which was initially set up in our assembly shop and tested for a short period of time, at which point the project was shelved in light of other projects which had priority.

Then after that time, the project was reinstituted and we began to proceed with that project again.

Q About what time did you actually build your first under stacker?

A The first under stacker was built somewhere in the year 1968, approximately.

Q When was that first under stacker actually delivered to a customer, approximately?

A Early in '69.

MR. WHATT: Would you please mark as Plaintiffs' Exhibit 3, a drawing entitled,

"In Line Quarter Bundle Ejector, Universal Corrugated Box Machinery Corporation," and was marked during the deposition testimony as Defendant's Exhibit 2.

MR. FABER: No objection.

THE CLERK: Marked as Plaintiffs' Exhibit 3 for Identification.

(So marked.)

MR. WYATT: I offer Plaintiffs' Exhibit 3 in evidence.

MR. FABER: No objection.

THE CLERK: Marked into evidence.

(So marked.)

MR. WYATT: Would you mark as Plaintiffs' Exhibit No. 3-A, a blowup of Plaintiffs' Exhibit 2, please.

THE CLERK: Marked into evidence as Plaintiffs' Exhibit 3-A for Identification. So marked.

(So marked.)

MR. WYATT: I offer Plaintiffs' Exhibit 3-A into evidence.

MR. FABER: No objection.

THE CLERK: Received into evidence.

(So marked.)

MR. WYATT: May I have permission to have Mr. Pulda come down next to this diagram?

THE COURT: Surely.

BY MR. WYATT:

Q Mr. Pulda, can you tell me what is shown here in this diagram which has been marked as Plaintiffs' Exhibit No. 3-A, please; would you explain to the Court just what that is?

A First, your Honor, it is a schematic which illustrates the general over-all operation of the equipment.

I'd like to first point out the elements that are involved and then I will go back overthe elements to point out their actual function.

Q May I just stop you a second.

Is that the first or prototype model built by Universal?

A Yes. This is the schematic for the original prototype as supplied to Meade Container in Edison, New Jersey.

Q How many devices of this type were actually built?

A There was only one prototype of this type manufactured.

Q Do you have any idea where this machine is presently?

A At the present time it is my understanding that the machine was removed at the customer's request and is now in the Koppers plant in Baltimore.

Q Would you proceed to explain the operation of this prototype device to the Court?

A First of all, I will go through the elements involved.

Number one, a photoelectirc counting head which sees the box coming in.

Number two, a set of horizontal feed rolls.

Number three, a conveyor.

Number four, a pair of vertical plates, one a front plate here --

MR. FABER: Excuse me. I am looking for the numbers 1, 2, 3, 4, on the exhibit. Are they there?

THE COURT: He's merely indicating by what he --

MR. WYATT: He's explaining this to the Court.

MR. FABER: If he's going to use a number, why can't he just mark the number on there.

THE COURT: All he's doing is giving us a statement of the schematic drawing by saying this is the first thing he sees, the second thing, I understand.

MR. BERLINER: This exhibit has been testified to during the taking of the deposition, and it has letters.

THE COURT: It has some letters.

MR. BERLINER: Letters used to designate particular parts and it would make the record simpler if the witness would refer to the letters.

THE COURT: Will you do that, please, A, H, K.

You have the letters there. Why don't you indicate by the letters.

THE WITNESS: Starting from the beginning, your Honor, a counting head designated "H" is the first element. The second element being a set of feed rolls, horizontal feed rolls, which in this particular drawing, your Honor, doesn't seem to have a letter designation.

THE COURT: Let's call it --

MR. WYATT: They are not all numbered, your Honor.

THE COURT: Let us call it Z.

MR. BERLINER: They are designated as adjustable lower pull rollers.

THE COURT: That is not K. K is one of the straightening plates in the back.

MR. WYATT: May I suggest that he not refer to them --

THE COURT: Are you looking at the same thing I am looking at?

That has to be Z because there are no letters. They are called adjustable lower pull rollers; is that what they are?

THE WITNESS: Yes.

THE COURT: Mark that Z.

THE WITNESS: The second element, then, has been identified as Z. The third element being the conveyor, in this case being designated as, I believe, P.

The fourth element being a pair of vertical plates, the front plate of which I believe has been designated C.

The rear pivoting plate has been

designated, I believe, as B, if I am correct there.

The slapper plate is designated as B, your Honor.

THE COURT: I see it.

THE WITNESS: The next element is a short rapid stroke pusher, which in this case has been designated, I believe, air cylinder G and the pusher plate F.

The last element is a pair of vertical conveyors which have been designated by the letter M, vertical drive rollers.

Now I will go back over the actual function of these elements, your Honor.

As the box is being issued from the discharge end of an adjacent piece of equipment which is not part --

THE COURT: Let's call that a feeder so I will know what it is.

THE WITNESS: A feeder, which is a complete separate piece of equipment not attached to the machine in question; it passes the photoelectric counting device. This device registers the transfer of that particular box

blank on an electronic counter, storing this information for further usage.

As the box proceeds further along it is picked up by a set of pull rollers, which we have designated as Z, and is carried in a horizontal fashion into conveyor P, at which point it begins to wedge its way under a previously stacked blank.

At the extreme left side of the stack, the stack is being contained by a fixed plate C.

During the period of time that the box takes to enter, there is also a pivoting slapper plate which intermittently operates on the trailing edge of the blank.

As the stack E, as shown in here, builds up and the predetermined count is reached, as set by a set of knobs on the electronic counter that I believe your Honor has seen in the plant --

THE COURT: That's right.

THE WITNESS: This stored information then sends out a pulse which initiates the removal cycle on our machine.

The pulse causes the rapid five-inch

stroke pusher to displace the pile approximately five inches and from that point the vertical belt conveyors pull from the side of the stack the stack, the additional distance off the accumulating stack underneath.

That is the basic operation of the prototype.

Now, the method of attachment of the pusher plate to the pusher cylinder on this particular machine is such that pusher plate J, which is a --

MR. WYATT: Excuse me, your Honor.

Q Is pusher plate J the backing plate rather than the actual pushing plate?

A That's correct. Pusher plate J is a mounting plate which does not come in contact with the actual material.

THE COURT: I see that.

THE WITNESS: Pusher plate J is permanently fastened to the rod end of the cylinder, which in this case was marked G. Pusher plate F was mounted to pusher plate J through a set of side gives, which allowed for an upward motion between these two items.

Q In other words, this pusher F can slide up and

down on this mounting plate J, would that be correct?

A That's correct, sir.

Q Continue, please.

A During the actual initiation of the displacement there is no entry of blanks under the stack, and the pusher then displaces the top part of the pile until such point as the conveyors can complete the exit of that particular stack. But on the return stroke the pile has been alleviated from the weight of the boxes on the top and have a tendency to spring the rear end of the pile. This springing effect, thus rubbed on the bottom of the pusher plate and --

Q On the return stroke?

A On the return stroke, and at this point we had hoped that this vertical movement or slide would relieve some of this scraping effect.

Unfortunately, this was one of the deficiencies of our original prototype and why we went into a later redesign on the actual item in question for manufacture as a salable item.

Q What did you do with the pusher in order to eliminate that problem?

A In order to eliminate this problem we pivotally mounted the pusher air cylinder and introduced a second cylinder which would in effect actually cause the cylinder to

raise out of contact with the material through an arcuit path.

MR. WYATT: If I my digress, we will go into our production model in a moment, but I would like to point out in further detail to the Court the details concerning Mr. Pulda's testimony that our slapper operates in a pivotal manner and not in a reciprocating manner in reference to our argument of file wrapper estoppel.

MR. FABER: If there will be testimony, the witness should be sworn. If there is going to be summation, there is a proper time for it.

THE COURT: Surely.

MR. WYATT: Will you mark as Plaintiff's Exhibit 4, please, an engineering diagram that in the right-hand corner has the following: "Squarer plate crank inline squarer and bundle ejector, Universal Corrugated Box Machinery Corporation."

THE CLERK: Diagram marked for identification as Plaintiff's Exhibit 4.

THE COURT: Look at it and see what it

is.

Mark it into evidence.

MR. FABER: I have not seen it.

MR. WYATT: Here is a copy of Plaintiff's Exhibit 4 for your Honor. We have an extra copy also for the Defendant for their use.

THE CLERK: Diagram marked into evidence as Plaintiff's Exhibit 4.

MR. FABER: Your Honor, I would like to hear the testimony before it goes into evidence.

THE COURT: You want the foundation for it? All right. Withdrawn from evidence.

MR. WYATT: All right, your Honor.

Q Mr. Pulda, I hand you Plaintiff's Exhibit 4. Would you tell me what this engineering diagram shows?

A This was the original design layout for the prototype spanker plate and the mechanism that was involved to produce this spanker plate.

Q Would you explain to the Court what the function of it is?

A Your Honor, this plate here is the spanker plate that was actually used on the prototype machine.

The spanker plate is mounted to a pivot center through this bar --

Q Would you mark the pivot center as A, please, Mr. Pulda, on the exhibit, or would you just write out "pivot center" right on that exhibit, please?

(Witness complies.)

MR. FABER: Will you make a verbal record of what has been done, please, Mr. Wyatt?

MR. WYATT: Mr. Pulda has written on Plaintiff's Exhibit 4 the words "pivot center," and has an arrow directed to what I believe that you indicated is the pivot center of the slapper of the Universal Prototype Machine.

THE WITNESS: That's correct.

Now, this slapper plate is connected to the pivot center through this arm and its motivating force is through a set of links. This link traveling up and down causes a motion about this pivot center so that we get this pivoting effect, your Honor, when it slaps the back of the sheet (indicating).

BY MR. WYATT:

Q Proceed, please.

A Basically, that is all that this drawing shows here.

Q Would you describe that motion as a reciprocating longitudinal motion?

MR. FABER: Objection, your Honor.

THE COURT: No, I couldn't --

MR. FABER: Objection.

THE COURT: He didn't really describe it. He said back and forth with the pointer, which means nothing on the record.

THE WITNESS: A pivoting motion, about the pivot center, such that the slapper comes in contact through a pivoting motion with the back of the blanks in question.

THE COURT: What type of motion is this? We know it is a pivoting motion. Is it a longitudinally, vertical -- what is it?

THE WITNESS: It is an arcuit path. This arcuit path would be through a vertical component, more or less, at this point.

THE COURT: That explains it.

MR. FABER: No objection to that going into evidence.

THE COURT: Received.

(So marked.)

Q Mr. Pulda, just referring again briefly to the prototype device, let me ask you this: If you did not have the vertical rollers in operation, what would happen

to the stack on top of that five-inch movement of the stroke?

A Well, due to the fact that the pusher cylinder only initiates or displaces the top portion of the stack, the stack would stop pretty much dead at that point and there would be no way for the stack to be removed, with the exception of entering into a set of vertical rolls, vertical drive rolls which come in contact with the side of the stack thus pulling the stack away from the oncoming or rising stack in here.

We had some very bad experiences in the beginning when the operator didn't set this distance between the vertical belt conveyor rolls at the proper dimension in the beginning, and if there was any clearance of course the stack just lay there and we had a tremendous jam-up.

So that this was borne out very vividly with our set-up.

Q Can you say then it is actually these vertical drive rollers that remove the top of the stack?

A Definitely. If the vertical drive rollers are not there, the stack is not removed.

Q The stack, however, has been deplaced five inches but not removed.

A That's correct, to initiate the entry into the take-off section.

MR. WYATT: Would you mark as Plaintiff's

Exhibit 5 a drawing of Plaintiff's first production model entitled Inline Squarer and Bundle Ejector.

It was previously marked as Defendant's Deposition Exhibit 9.

THE CLERK: Marked for identification as Plaintiff's Exhibit 5, one diagram.

(So marked.)

MR. WYATT: We have a copy for your Honor.

MR. FABER: They can be marked into evidence.

THE CLERK: Marked in evidence as Plaintiff's Exhibit 5.

(So marked.)

MR. WYATT: I offer into evidence Plaintiff's Exhibit 5A which is a blow-up of that same drawing, please.

THE CLERK: So marked Plaintiff's Exhibit 5A in evidence.

(So marked.)

BY MR. WYATT:

Q Would you explain to the Court, Mr. Pulda, what the similarities and differences are in the device, the Universal Production device shown in Plaintiff's Exhibit 5A,

please?

A This again is a schematic drawing to illustrate the elements involved in the actual early vintage production models of the understacker.

With the exception of the pusher element, all other elements remain the same as the prototype, your Honor. The pusher element was redesigned such that the cylinder, in this case marked, I believe, Q, and also it has an S associated with it, but let's take the Q at this point -- cylinder marked Q was pivotally mounted at pivot point A --

Q It is, as I understand, is it not -- not was?

A It is pivotally mounted at point A. And we introduced a second cylinder, your Honor, which, in this drawing, is identified as T.

MR. WYATT: T, and there is a V or a U for the pivot point.

THE WITNESS: In this case, your Honor, we again use a very rapid short stroke to initiate the displacement of the upper portion of the stack into the vertical drive belts to remove the stack completely, and at the end of the very rapid short stroke we, through a pneumatic system, caused the cylinder marked S to pivot about point A and return through an

arcuit path.

This is done by the motivating force provided by cylinder T.

At the end of the --

MR. WYATT: Your Honor, the device that your Honor saw at the Hencken's plant, the Universal device, had this type of operation where there was a piston underneath that caused it to pivot upward.

THE COURT: I recall that.

THE WITNESS: At the end of the return stroke, your Honor, the air cylinder T then initiates a downward pivoting motion to cylinder S, returning it to its normal home horizontal position.

This is then the basic difference between the prototype and the first production models.

Q Can you tell me, Mr. Pulda, what type of slapper plate and what type of mounting does the production model have?

A The production model similar to the prototype has a pivoting slapper motion which intermittently operates on the back edge of the pile for alignment purposes, your Honor.

That would be this plate here, and it pivots through, I believe, a point marked B -- it is kind of hard to understand on this particular blow-up, but I believe it is through pivot point B at this point.

MR. WYATT: Will you please mark as Plaintiff's Exhibit 6 a drawing showing the construction of Universal Underfeed Slapper Plate, and it is entitled paddling section of the inline squarer and bundle ejector, Universal Corrugated Box Machinery Corporation.

We have a copy of this drawing for your Honor.

THE CLERK: Marked for identification as Plaintiff's Exhibit 6, diagram.

(So marked.)

(continued next page)

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MR. FABER: Have you got a copy for us?

MR. WYATT: Yes, we do.

I offer Defendant's Exhibit 6 in evidence.

Q Mr. Pulda, will you tell the Court what the drawing marked as Plaintiff's Exhibit 6 for identification is?

A This drawing, Plaintiff's Exhibit 6, is the design layout for the spanker plate pivoting motion that is being used on the production Universal Understacker, your Honor.

At the far right lower portion of the drawing, we see a spanker plate, which is identified as paddling plates mounted --

Q Would you circle that with the red pen, please?

A Mounted to an arm at a pivot center, which I will mark as "pivot center" on the drawing, and being motivated or driven through an eccentric link mechanism in the upper portion of that drawing, such that the actual motion that the paddling or spanker plate goes through, is a pivoting motion in a vertical -- the component being measuredly vertical, in a vertical direction, your Honor.

Basically, that's the sum and substance of the entire drawing, these views being -- just showing cross sections of the actual mechanics of those -- of that.

Q Mr. Pulda, referring again to -- I refer you to both Plaintiff's Exhibit 3A and 5A, and I ask you to explain

to the Court, the relationship between the counting of the blanks coming in and the initiation of the pusher action here, and just what occurs generally, if you would, please?

A At the point where the predetermined count is finally achieved, meaning that the box that's passing the photohead detector device is now the final box in a pre-set quantity, a signal is initiated to the pusher device --

Q May I just interrupt? What initiates the signal, what part of that box coming in?

A The leading edge of that box is what triggers the photo-counting device and initiates the signal to the pusher. Now, because of the rapid --

Q May I ask you to mark on here in red pencil, on this drawing, at the point that you can, circle the point at which the signal for the pusher plate to operate is initiated. Circle that, if you would, please. And would you put "pusher initiation signal."

Now, would you go on from there, if you would? Thank you, Mr. Pulda.

A At the point that the initiation of the signal takes place, which is at the leading edge of the box blanks, the electronic counter sends a signal to the pusher air cylinder system, and because of its very rapid short strokes, the box blank does not have sufficient time to cause an entry into the underside of the stack.

This very rapid short stroke, of course, displaces the upper portion of the stack, and the removal is then followed up by the vertical drive rolls in this case.

Q In view of that operation, can you tell me is there a rise in the stack during the time that pusher is operated?

A I have never seen any rise in the stack during the period of time that the pusher is in operation on the outward stroke.

MR. WYATT: We now again offer plaintiff's exhibit 6 in evidence.

MR. FABER: No objection.

THE CLERK: Marked in evidence, Plaintiff's Exhibit No. 6.

MR. WYATT: Would you please mark as Plaintiff's Exhibit No. 7, a photograph which will be identified by the witness.

THE CLERK: Marked for identification as Plaintiff's Exhibit No. 7 a photograph.

MR. WYATT: Your Honor, we have a copy of this Exhibit for the Court.

Would you also mark the blowup of the photograph Plaintiff's Exhibit 7 as Plaintiff's Exhibit 7A?

THE CLERK: Marked for identification as Plaintiff's Exhibit 7A, blowup.

Q Mr. Pulda, will you tell me what is shown here in this blowup of the photograph marked as Plaintiff's Exhibit 7A, please?

A This photograph, your Honor, shows the side elevation of the machine, the prototype machine as originally supplied to Meade Container and Edison in New Jersey. It shows in this view, the pivoting spanker plate which comes in contact with the trailing edge of the stack.

It shows the mounting arm for this pivoting spanker. It shows the link mechanism that actually provides the motion for the spanker.

It also show the pusher plate that was previously described, your Honor, and it shows some of the mounting structure for the holding -- retaining the pusher in a horizontal position on that particular machine.

Q Can you see the slapper plate in this photograph?

A Yes, you can.

Q Will you point that out?

MR. WYATT: This, your Honor, if I may point out, is our first machine and it's somewhat different than the machine that your Honor viewed.

THE COURT: Right, I see that.

MR. WYATT: Then would you mark as Plaintiff's Exhibit 8, another photograph of the prototype device?

THE CLERK: Mark for identification as Plaintiff's Exhibit 8 another photograph of the prototype device.

MR. WYATT: Would you hand that up to the Court, please?

Q Mr. Pulda --

MR. WYATT: And I also ask you to mark as Plaintiff's Exhibit 8A --

THE COURT: It's the same machine, isn't it?

MR. WYATT: Yes, your Honor, this is the same prototype. This is now with the pusher moving forward.

THE COURT: Moving forward, I see.

THE CLERK: Marked for identification as Plaintiff's Exhibit 8A, blowup.

MR. WYATT: Blowup of the photograph 8.

Q Will you tell me what is shown in 8A, please?

A 8A, your Honor, shows also the spanker plate, which is pivoted at a point back in this area (indicating), and it shows the pusher plate in motion, your Honor. At this point, the upper portion of the stack has been displaced

approximately four to five inches, and is entering an area back in here which will remove the upper portion of this stack.

Q What is in that area you just described, that you can see?

A This is a pair of vertical conveyor belts or roller, which --

THE COURT: Take them off?

THE WITNESS: (Continuing)--exit this stack, your Honor, that is correct, sir.

Q Now, would you tell me, could you just point out to the Court, what's happening to the underlying stack as the top of the stack is being removed here?

A Your Honor, as the weight of the top of the stack is being removed, the rear portion of the stack has a tendency to spring open --

THE COURT: Yes.

A (Continuing)-- and flare in an upward direction at this point.

THE COURT: I can see that.

MR. WYATT: Would you mark as Plaintiff's Exhibit 9, another photograph of the prototype device?

THECLERK: Marked for identification as Plaintiff's Exhibit 9, photograph.

MR. WYATT: And would you mark as Plaintiff's Exhibit 9A, a blowup of the photograph marked as

Plaintiff's Exhibit 9.

THE CLERK: Marked for identification as Plaintiff's Exhibit 9A, blowup of photograph in Exhibit 9.

Q And will you explain to the Court what's shown in Photograph 9A, please?

A Photograph 9A is basically similar to the other one, your Honor, with one exception.

Q It's also of the prototype device?

A Its of the prototype device, your Honor. And at this point, the air cylinder and pusher plate is going through a reversal of direction, and at this point, your Honor, it shows the slight gap between the pusher plate and the trailing edge of the pilot that it has already displaced, your Honor.

THE COURT: On its way back?

MR. WYATT: Yes.

THE WITNESS: Also, your Honor, it does indicate again ---

THE COURT: The fluffiness?

THE WITNESS: The fluffiness of the --

THE COURT: The pusher plate is on its way back, and it's being rolled --

Q Can you tell me, is this pusher plate moveable and slideable on the backing plate, here?

A Yes, this unit at this point is able to slide in an

upward direction, but it does require a considerable force, and on the return stroke, a certain amount of stuffing does take place on the top portion of the stack that remains in the stacking device, your Honor.

(Continued on next page.)

Q Is that the problem you were describing earlier?

A This is one of the deficiencies of the original --

THE COURT: That's the one in the prototype?

THE WITNESS: Prototype, your Honor.

THE COURT: And that had to be corrected?

THE WITNESS: Correct, your Honor.

THE COURT: With the other cylinder.

THE WITNESS: Right, your Honor.

MR. WYATT: Now, as a final photograph of the prototype we ask you to mark as Plaintiff's Exhibit number ten this photograph.

THE CLERK: Marked for identification as Plaintiff's Exhibit number ten, a photograph.

THE COURT: Now we're talking about there would be rejection because of the scuffing of the top one if it weren't removed.

MR. WYATT: Yes, your Honor, on the back stroke here, on that slideable plate it still scuffs.

THE COURT: On this type?

MR. WYATT: On this type, yes, sir.

THE COURT: I understand that.

MR. WYATT: And would you mark as

Plaintiff's Exhibit 10A for identification the blow-up of the photograph of Plaintiff's Exhibit 10.

THE CLERK: Marked for identification as Plaintiff's Exhibit 10A the blow-up of the photograph in Plaintiff's Exhibit 10.

Q And will you explain to the Court what Plaintiff's Exhibit 10 is, or 10A?

A Your Honor, this is a close-up view of the same prototype machine showing a little more clearly the spanker plate and the pitching arm through which it's mounted and the drive link mechanism which provides the pitching motion to the spanker plate, your Honor.

THE COURT: All right.

MR. WYATT: Please mark as Plaintiff's Exhibit 11 what is a photograph of the production model with the second pneumatic cylinder.

THE CLERK: Marked for identification as Plaintiff's Exhibit number 11, photograph.

MR. WYATT: And would mark as Plaintiff's Exhibit 11A the blow-up of the photograph 11.

THE CLERK: Marked for identification as Plaintiff's Exhibit 11A, blow-up of picture

in Plaintiff's Exhibit 11.

Q Now would you tell the Court what is shown on the photograph Plaintiff's Exhibit 11 -- or 11 A?

A This, your Honor, is a photograph of the early vintage production models of the understacker showing the addition of the second cylinder, which allows the main pusher clyinder to pivot at a point which is unable to be seen on this particular photograph through an arcuit path and return to its original position.

This shows the cylinder extended, your Honor, merely to allow for being able to see the mechanism behind it.

THE COURT: All right.

THE WITNESS: In addition to the pusher mechanism it does also show a portion of the spanker plate, and, your Honor, the mounting arm through which the pitching motion is acquired on the spanker plate.

MR. WYATT: Now at this point, your Honor, we offer in evidence these photographs that we have marked, starting out with 7: 7A, 8, 8A, 9, 9A, 10, 10A, 11, and 11A, your Honor.

MR. FABER: Well, strictly speaking,

I should be because there isn't the right kind of proof about the photograph. I agree to their going in.

THE COURT: All right.

MR. WYATT: They took them, your Honor.

THE COURT: Well, that always creates a problem. All right. Mark them in evidence.

THE CLERK: Marked in evidence as Plaintiff's Exhibit 7, 7A, 8, 8A, 9, 9A, 10, 10A, 11, and 11A.

MR. FABER: May I make a request to the Court.

THE COURT: Sure.

MR. FABER: I believe identical photographs were produced during the certain prior depositions. Would Mr. Wyatt agree to making a record of the identity between certain exhibits now introduced and the exhibits in those depositions?

MR. WYATT: Yes. I don't have them ready to give the Court. I prefer not to take the Court's time now.

MR. FABER: May we do that in the absence of the Court?

5.

MR. WYATT: Sir?

MR. FABER: May we do that, make a record in the absence of the Court?

THE COURT: Sure, we'll take a recess. In about five minutes.

MR. WYATT: Your Honor, we will have no further questions of Mr. Pulda, and next after cross-examination -- Mr. Pulda left Universal at this point. We have another witness to explain a further development in our device.

At this point we have no further questions.

THE COURT: Do you have any cross-examination?

MR. FABER: Yes, we do, but if they want us to put two witnesses together and let me cross-examine them seriatum that's all right.

MR. WYATT: Well, we do have a problem with Mr. Pulda. He is in his own business and he would prefer to leave as soon as possible.

THE COURT: I don't know how much cross-examination is going to be involved.

The nomenclature is what he really gave me I think. Do you want to take a recess now first? Take a five-minute recess or a ten-minute recess, then we'll come out and you can cross-examine.

MR. WYATT: Thank you, your Honor.

(Whereupon a recess was taken.)

(Continued on the next page.)

F&rp
2AMR2

1 Pulda - cross - Faber

CROSS-EXAMINATION

BY MR. FABER (Cont'd):

Q You stated that you were assistant chief engineer in 1955, when you came to Universal; is that right?

A No, sir, I did not.

Q Give us your history at Universal from 1955 until you became assistant chief engineer?

A From 1955 I was originally hired at Universal as a layout draftsman, and I progressed through the ranks as a designer later on, and then later held the position of assistant chief engineer, which was approximately six years from the time when I left Universal. In other words, I was chief engineer for three years, assitant chief engineer for an additional three years.

Q So you actually became assistant chief engineer around 1965?

A That's correct.

Q Is that right?

Now, when you -- were you aware of all of the machines that Universal was making at any time prior or between the period 1955 and 1965?

A I was aware of all of the equipment, yes, sir.

Q Did Universal during the period '55 to '65

make folding machines?

A Yes, sir, they did.

Q Did they make stacking devices?

A Yes, sir, they did.

Q As a matter of fact, stacking devices was their primary product from the beginning of that company, even before you came; do you know that?

A I can't testify, sir, to what happened before I came there, but during my period with the company, I would tend to disagree with that remark as being their primary product, sir.

Q What were their products around 1955, when you came, as far as you know?

A The semi-automatic taping machine was perhaps one of the largest volumes of business that they had. They also manufactured rotary slotter printers, slitters, sample machines, take off tables for the corrugator, press stackers, and they did have an under stacker for sheets.

Q Would you describe for the Court as graphically as you can, using only words, how that press stacker -- how that underfeed stacker for sheets operated?

A Generally that machine was used in conjunction

with a slitter and operated on sheets rather than folded material. Its basic operation was very similar to the Greenwood type under stacking device. It stacked sheets on a conveyor, a vacuum conveyor belt, and due to a displacement in height between the previously stacked blank and the incoming blank, the sheets were able to wedge themselves in and stack upward.

Q Now, you mentioned that they made a taping machine. Did that have anything to do with folding as well?

A The semi-automatic taper was used by an operator who performed the folding operation prior to the tape being applied, such that this machine applied a length of tape to a pre-folded blank.

Q Now, this list that you gave us, I just want to be clear, was it around 1955 or during the whole period, '55 to '65, that this was the list of products?

A This list of products was in production at the period of time that I started with Universal, sir.

Q Then Unviersal subsequently started making a folding machine?

A Yes, sir, they did.

Q Did you have anything to do with designing it?

A Yes, sir.

Q The folding machine was of course for the folding of carton blanks into tubular folded cartons; is that right?

A Yes, sir.

Q And when we look at the blow-up of Exhibit 3-A, are we at the lower right-hand corner looking at the output of such a folding machine?

A Yes, sir, it could be.

Q Now, when this underfeed stacker of Exhibit 3 was designed, it was designed at Universal, wasn't it?

A Yes, sir, it was.

Q And it was designed to be compatible with a Universal machine at least, the Universal folding machine at least, as well as possibly others?

A Yes, sir.

Q So that this lower right-hand corner showing delivery end of folder gluer, is that the delivery end of a Universal machine?

A It could be, sir.

Q This showing of the delivery end of the folder gluer, is it consistent with its being the delivery end of a Universal folder?

A I believe I would like a clarification on

"consistent," if you will, please.

Q Is there anything about this showing of the element labeled "Delivery end of the folder gluer" that rules out its being connected with a Universal or part of a Universal folder?

A No, sir.

Q So that it could very weel be part of a Universal folder?

A Yes, sir.

Q That is all I want to know.

All right, we will come back to that exhibit. I will leave it up there a moment.

Now, when you were -- by the way, who did the actual design of this prototype concept shown in Exhibit 3 or 3-A?

A The initial sketches were done by myself, and I had a project designer, layout draftsman and detailers working directly under me for that purpose, sir.

Q So therefore, can you tell us whose initials those are? It looks like MRC -- at the lower right-hand corner of Exhibit 3.

A That, if I may correct you, Mr. Faber, is M, and I believe it is RG for George, and this is one of the employees at Universal. His name is Michael Griffin.

Q Now, was this drawing of Exhibit 3 made before any actual hardware was built or an actual unit was built?

A A sketch of this type was made -- a hand sketch was made by myself to initiate the project. This is a refinement of the handsketch, which actually came about as a schematic from the details after the machine was in construction stages.

Q So that is it correct to say that on February 24, 1969, the date applied to Exhibit 3, the machine therein shown was not yet fully constructed?

A Yes, sir, that machine was fully constructed at that point.

Q All right.

How much before that was that machine fully constructed?

A The prototype was in process of being manufactured during the year 1968, and for a short period of time was shelved, and then the project was re-opened again such that some of the testing that took place was towards the latter part of 1968. That is in-shop -- in our shop-testing.

Generally I would say the machine was completed at the very end part of '68.

Q And when was the machine as represented by Exhibit 3 shipped to Meade?

A It was shipped to Meade early in 1969, and I don't recall the exact date, but in the spring of '69 or the late winter.

Q And was that machine of which Exhibit 3 is stated by you to be, shall we say, a schematic, used in connection with the Universal folder at Meade?

A Yes, sir, it was.

Q And do you have any knowledge at all, or did you have anything to do with the shipment of the Universal folder to Meade?

A Not directly, sir.

Q All right. Now, when this machine of Exhibit 3 was shipped to Meade to be put on their folder, what was the range of boxes that the folder at Meade with this machine of Exhibit 3 was intended to take?

A Generally whatever the press could produce. There were some limitations, but in general, the size that the press would produce.

folls.

(Continued on next page.)

CROSS EXAMINATION

BY MR. FABER (Cont.):

Q Well, what is that range in inches from smallest to largest?

A The blank size approximately eleven inches in depth going through the machine by 21 and-a-half across the face of the machine. That would be the small blank.

The large size would be 48 in depth going through the machine to approximately 107 or 108 inches going across the face of the machine.

Q When you say "48 in depth going through the machine," you mean 48 inches in the direction in which the balnk is moving through the folder; is that right?

A That's correct.

Q Now, was this schematic of Exhibit 3 taken off a completed machine? Was it an advertising type schematic? What was it?

A Basically it was used to be able to illustrate the idea and the function of the unit.

Q All right.

Now, taking -- you have marked there, or somebody has marked there a five-inch stroke for the pusher, and do you see those two lines indicating the extent of the five-inch stroke for the pusher?

And I am now pointing to the two lines between a double-ended arrow.

Do you see those?

A Yes, sir.

Q And those two lines indicate the depth of the five-inch stroke for the pusher, don't they?

A Yes, sir, in a schematic fashion.

Q Well, using -- do you mean dimensions change throughout this drawing?

A Generally the concept of a schematic is to illustrate a function rather than to be a scale or to give exact physical relationships one to the other.

Sometimes a view can be thrown out of proportion to allow other items to be seen.

Q All right.

In other words, the machine, the sketch can be made bigger in one place and smaller in another in the hope that you will convey what you want to convey; is that right?

A True.

Q Taking this length of this five-inch stroke, and the length of the blank, that blank there is shown as about twenty inches long; isn't it -- and you can use a ruler, if you wish.

A As I pointed out, Mr. Faber, I have no reason to believe that any portion at this point is exactly to scale.

Q All right.

Is any portion of it thrown violently out of scale on purpose, and for what reason?

A I would have to examine the drawing a little closer to be able to tell if it's -- if anything is perhaps violently out of scale.

Q As a matter of fact you were the boss of this project, it was assigned to you.

I think you could tell us right now whether this is thrown violently out of scale in any way.

A Generally, it looks fairly well. I -- the only thing that perhaps might not be illustrative of the actual conditions is the position of the folder relative to the feed end of the understacker, and perhaps the position of leading edge to leading edge of blank here, primarily because of room on the drawing paper.

Q Yes.

In other words, the folder actually comes up closer to the stacker?

A No, to the contrary, perhaps it's further away because of the fact -- as I pointed out there was -- the draftsman or layout man who did this didn't have quite enough room

perhaps on this size paper and he compacted it a little bit just to illustrate some sort of equipment on that end of the machine.

Q All right, I want you to show the Court how much further back, from your knowledge, not your guesswork -- the fact you worked on this -- how much further back the top row of the belt from the folder, the top row being the second row from the bottom and the second row from the right, how much further back it actually is in the machine as delivered to Meade? In proportion, of course.

A In proportion.

Q Well, obviously, this point here, the five-inch stroke is shown as approximately an inch or so. So how much further back is that roller?

A The minimum blank that we were able to handle was around, as I mentioned, 11 inches, I believe. So,therefore, the center nip between the discharge end of the folder to the feed end of the understacker would be in the area of about 11 inches. Otherwise we wouldn't be able to handle that sheet.

Q All right, now --

A So that if you see the five inches on the top, sir --

MR. FABER: Come up, please.

I ask permission, with Mr. Wyatt present,

on Exhibit 3A to mark the center nip of the roller, of the feed-in roller from the folder and the rollers that feed the stacker.

May I do that?

THE COURT: Yes.

Do you want to do it?

THE WITNESS: Do you want to do it, Mr. Faber?

MR. FABER: No, you do it. That's even better. I am using a blue pen for this, a blue marking pen.

THE WITNESS: Did you want -- what was the first one you wanted marked, Mr. Faber?

MR. FABER: The center nip between the delivery end of the folder gluer and the input operation for the stacker.

And by the way, you can mark that with a bracket if you wish, in any way so we can tell what it is.

THE WITNESS: What I was referring to, sir, was the distance between here to here in a horizontal direction.

CROSS EXAMINATION

BY MR. FABER (Cont.):

Q Let's put a "Q" on that line. All right and that dimension should not be greater than the dimension of the smalles box you are going to handle; is that what you said?

A Generally that's true, yes.

Q So now, the blanks that we see -- is it true or not, the blanks that we see in this stack-- and use a ruler if you wish -- are because of the five-inch dimension for the stroke shown,about 20 inches long, aren't they?

A Proportionately, yes. Could be 20 inches, yes.

Q And if they are 48 inches long, which you said is possible in that machine, they would be two point something times as long, wouldn't they; is that shown here?

A Right.

Q So now you have got yourself a gap between the leading edge of one blank shown as a nice heavy solid line at the lower right-hand corner of the drawing, and the trailing edge of the blank that's going into the stack.

And there is a gap between them; isn't there?

A Yes, sir.

Q And as the blank gets bigger the gap gets smaller, doesn't it?

A Generally, that's a true statement.

Q So that if you are running, say, a standard

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number of blanks a minute, like 200 a minute, 300 a minute, if you are running short blanks the blanks -- then the gaps are long, if you are running long blanks, then the gaps are short, isn't that right, for the same number of blanks per minute?

A Onthis particular machine it's independent of the number of blanks, but that's generally true.

Q Well, let's take this particular machine and go to the others. Why is it independent of the number of blanks in this particular machine?

A The press has a kicker feed on it.

(Continued next page.)

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Q You mean the other end a long distance away from this feedout as shown on figure three, Exhibit three, is what you are calling the press; is that right?

A That's correct.

Q So it kicks?

A Yes.

Q That is an intermittent kick?

A That's right.

Q That intermittent kick which feeds it into the slotter and then the folder is so many oscillations per minute to get out so many blanks per minute, isn't it?

A That's correct.

Q If you are running three hundred blanks a minute and they are 11 inches long then the gaps between them will be larger than if you are running three hundred blanks a minute and the blanks are thirty inches long, isn't that right?

A That's correct.

Q Tell me, in this Exhibit 3, did you direct the selection of the showing of the gap between the trailing edge of the blank, which is still in the folder belts -- the leading edge of the blank which is still in the folder belts, and the trailing edge of the blank which is entering the stacks, did you direct anyone to show it at that spacing?

A That is strictly arbitrary at this point. It is not to scale, and therefore there is no exact position between one to the other.

Q We keep hearing -- dimensions are very important in this thing. You say it is not to scale. How badly out of scale is it? Where is it distorted?

MR. WYATT: I object to that, your Honor. We have been through this at least once before and I believe the witness has answered.

THE COURT: He said the only thing is that gluing wheel there.

Q Where is it distorted?

THE COURT: He told us as to paper size. He said the only thing would be the pivot that he just indicated. He doesn't say anything else is distorted.

Q I would like you to look at the lower right hand corner, your Honor, and the witness, and -- you don't see it very well on three A, the little box that says scale, little box says -- I think it says, "1/8th inch equals 1 inch." Is that for real, or is that also distorted?

A That is on the drawing, but also on the left hand lower portion of that drawing it says "Do not scale."

Q That is an outline, --

THE COURT: "Do not scale".

All right.

Q Is that because it is an outline assembly and not to be used for actually building, isn't that right?

A That is true.

Q All right. Let us talk a minute about these folding belts. Can you describe to us the material of the folding belts?

A The folding belts consist of a canvas-tyep carcass which is impregnated with a rubber or neoprine compound and generally the service of that carcass has some type of a friction pattern.

Q What is the reason for that friction pattern?

A To prevent slippage between material being conveyed through the machine.

Q So that when these belts have reached the condition shown at the completion of the fold, at the right hand side of exhibit 3, they are holding on pretty tight to the blank, aren't they?

A Generally, they have control of the sheet.

MR. FABER: I ask the Clerk to mark this piece of belt Defendants Exhibit A for identification.

THE CLERK: Mark for identification as Defendant's Exhibit A, one belt.

(So marked.)

Q I show you Defendant's Exhibit A.

This piece of material is illustrative --

MR. WYATT: May I see that first, please?

MR. FABER: Of course you may.

MR. WYATT: Do you have another sample of this for us?

MR. FABER: I will cut off a piece for you.

BY MR. FABER:

Q Is this Defendant's Exhibit A illustrative of what you have described as the kind of belting used on these folding machines?

A Generally, this is the type of material. The color is not the same. I can't verify the upper layer as being identical to what we use.

In appearance it looks similar.

Q I am not holding you to its actual content, I just wanted you to tell us whether this was illustrative visually of what you have just described as a piece of belting used in the folding machine. Is that right?

A Yes.

Q All right. It is illustrative. Without your being able to know what its actual internal content is, it is the kind of belting that is used on the universal folder, which is shown schematically at the right

side of Exhibit 3, is that right?

A Yes, sir.

MR. FABER: I offer Exhibit A in evidence solely for the purpose of illustrating what the witness has described.

MR. WYATT: I have no idea what it is. If you tell me what it is, maybe we will have no objection to it.

THE COURT: He says it is similar to a belting that would be used on a machine, although it may not be that belting itself.

MR. WYATT: On our Universal --

THE COURT: On the Universal, yes.

MR. WYATT: On our Universal Folder? We have no objection.

THE CLERK: Marked into evidence as Defendant's Exhibit A.

(So marked.)

BY MR. FABER:

Q For the convenience of Plaintiff's Attorney, I will agree to cut that belt in half and leave only half of it in evidence so he may have the other half, if he wishes.

MR. WYATT: If that is ours, I can get a

piece of our own. Thank you.

MR. FABER: I do not represent it as yours. I picked it up at S&S last night.

THE COURT: He didn't say its yours.

MR. WYATT: I misunderstood then, your Honor. I would like to have half of it, Mr. Faber.

MR. FABER: May the record show that only half of that piece of belt will go in evidence. The other half will be given to counsel.

THE COURT : Can we cut it with a scissors. There are still wires running through there.

MR. WYATT: We withdraw our request for half of it.

MR. Faber has offered to furnish me with a piece of it.

THE COURT: We will have another piece here and we will mark it.

Q How soon after you arrived at Universal did you learn that S&S had an underfed counter stacker?

A I would have to -- I tend to believe probably, oh, maybe ten years later, ten, eleven; I am not sure exactly.

Q You mean you first learned about the S&S underfed counter stacker in about 1965?

A Somewhere in that area, yes.

Q You testified that in 1965 -- I am paraphrasing because I am not a good stenographer -- that discussions occurred at Universal on equipment for use with respect to folder Bluers, you were looking for something with less floor space.

Those were the discussions that preceded the --

MR. WYATT: I object to your paraphrasing his testimony, Mr. Faber.

If you want to read his testimony, then I have no objection to it.

MR. FABER: It is rather difficult to do so, and I ask the witness if he remembers saying that.

THE COURT: I will allow it.

Q Do you?

A Yes, sir.

Q Who were those discussions with at Universal?

A Mr. Ley, who was then the president of the company, and also in charge of marketing and sales with Mr. Lopez, who was the director of engineering and with myself, of course, and other Universal personnel.

Q Yourself, you are identifiable. Who are the other Universal personnnel?

A Generally, people involved in sales where perhaps they had a feel for market needs.

Q Can you give us other names besides Mr. Ley and Mr. Lopez?

A I think that at that point, it was Mr. Doldorf.

Q Spell that.

A Robert Doldorf, I believe it is D-O-L-D-O-R-F, if I am not mistaken.

Q All right. Was Universal then marketing an accumulating or a stacking device for the end of a folder that was not underfed at that time?

A Yes.

Q Will you describe that, using words as graphically as possible?

A Generally, it was what we called a gravity style bundle ejector, which took the prefolded presquared and preglued blanks and allowed them to fall into a hopper, counting them during their descent.

Then at a predetermined count, the flow of material was interrupted, and a pusher similar to our construction here, initiated the displacement of the stack into a set of vertical rolls, discharging the bundle out of the machine.

In other words, the operation was at that point similar to the new machine.

Q In other words, you took -- you simply took the blanks from the folder, let them go on some kind of conveyor into this boxlike structure in which they fell down, and when you counted enough of them, felt the pile was high enough, then the pusher went behind and pushed it out; is that right?

A The pusher never really pushed the pile out, it displaced it into a set of vertical pull rolls which did the actual discharging of the material.

Q You have been present during the beginning of this trial yesterday, haven't you?

A Yes, sir, I have.

Q Did you see any illustrative material, previous to your testimony, offered in evidence that described that kind of operation?

A The specific gravity bundle ejector you are referring to?

Q Yes.

A The only -- this is in yesterday's testimony you are speaking of?

Q Yes.

A I don't believe as a gravity-type unit, no, I don't recall any.

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MR. FABER: Now, I ask that what appears to be an advertising illustration be marked for identification as Defendant's Exhibit B for identification.

THE CLERK: Marked for identification as Defendants Exhibit B, an advertisement.

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(So marked.)

MR. WYATT: Do you have a copy for us?

MR. BERLINER: Yes, I do.

MR. WYATT: Thank you. I note, Mr. Faber, someone has already written something on here that I don't think was part of the original advertisement. Is that correct?

MR. FABER: That is correct.

MR. WYATT: Can you tell us who did that?

MR. FABER: We will find out, your Honor.

On the original, there are certain red bracket lines and numbers which appear here, but not in red on the Xerox. On the Xerox, you can't tell that they are red.

Do you recognize the device shown on Defendant's Exhibit B for identification?

A I do.

Q Do you happen to know how the red lines and

numbers 1, 2, 3, 4 appeared on this paper?

A No, I really don't.

Q However, what -- Very generally, what does the red bracket numbered 1 include?

A A feeding device and a folding device.

Q What does the red bracketed area number 2 include?

A The right angle suction transfer section -- suction the first time and transfer section.

Q Well, we will come back for a description. What does the red bracketed area 3 include?

A It includes a squaring portion, compression portion, and an additional right angle transfer device.

Q What does the red bracketed section 4 include?

A This is the gravity type, or gravity style bundle ejector.

Q The right angle member that you mentioned in the red bracketed area 2, tell us what happens to the blanks in that area when they come off the folding machines?

A As they are discharged from the folder, they hit the plate on the leading edge, which causes the forward motion of that particular folded blank to stop. The blanks drop a short distance onto a vacuum belt. This is a belt with perforations in it that allows for a negative pressure on the

underneath side, therefore, atmospheric pressure pushes the blank towards the belt.

Q And the belt moves, doesn't it?

A The belt moves at right angles to the infeed direction of flow.

Q And the belt carries the blank to section 3 of Defendant's Exhibit B, is that right?

A Correct, sir.

Q What happens in section 3?

A The infeed portion of section 3 has a conveying mechanism and a pair of parallel vertical belts, which tend to square the previously folded blank.

The box blank is in a shingled condition at this point, which means that there is one blank on top of the other, with a slight leading edge displacement.

Q Is that because the blanks are being pushed individually onto a moving belt?

A They are being carried by this belt, if that's what you are looking for.

Q They get onto the belt individually, don't they, that's how they get shingled?

A They initiate from the folding section individually.

Q Let me ask you, what is the purpose of sections 2, 3 and 4 in the device shown in Defendant's Exhibit B?

A 2 is the transfer section. 3 is the squaring section. 4 is the counting and ejecting section of a predetermined quantity.

Q So the purpose of the combined sections 2, 3 and 4 is to get counted stacks of blanks out of the blanks that are delivered from the folding machine, is that right?

A That is correct.

Q At the time you left Universal, April of 1971, were they still offering a machine for sale of the type shown in Defendant's Exhibit B?

A Yes, sir, as far as I know, they were.

Q As far as you know, when did Universal start selling, offering for sale, and actually selling the device of the type shown in Defendant's Exhibit B.

A The device as shown is an evolution of designs, and portions of it were not offered in the early stages of the folding.

This entire concept, perhaps was offered somewhere in area of about 1960, '61, perhaps '62.

Q And this entire concept, was this the concept that Universal was offering up through 1969, when you delivered that first prototype to Mead , that is, was the type of concept BXB the kind that Universal was offering and selling to the trade during the period '60, [illegible] up to at least 1969?

A I sort of missed something in between there, Mr. Faber. You said BX --

Q B, the one in front of you.

A I'm sorry.

Q Defendant's Exhibit B, excuse me.

A I'm not associated with legal terminology. Will you please re-read that question.

Q I think I better rephrase it and make it simpler.

Does Defendant's Exhibit B show the collecting and stacking concept which was Universal's stock and trade for that purpose, from the period about '61 into at least '69?

A Yes, it was.

Q There came a time, as you told us, in 1965, where Mr. Ley, the President, Mr. Lopez -- the Chief Engineer, wasn't he?

A He was -- At that point, he was Director of Engineering, Chief Engineer.

Q -- were interested with you in another kind of stacking device.

Can you tell us whether there was any specific occurrence in the industry, or at Universal, or in the trade that made that interest in another kind of stacking device desirable?

A At that period of time?

Q When you started in. Not the exact minute in '65, but when you had these discussions of equipment for use with the folder-gluers, was there any trade condition, or competitive condition, or a device that made these discussions necessary, or triggered them?

A Well, generally the reasons for these discussions, as I pointed out, were brought about by marketing information which came from our customers, requesting in some instances a machine that would require less floor space.

Many of the plants had a great deal of floor space, and some plants had limitations. So they brought forth requests for more compact pieces of equipment.

Q And S & S had such a compact piece of equipment, didn't it?

A At that time, I believe they had it on the market, yes.

Q And you told us that this project was shelved for a while in light of other projects.

What were the other projects that were more important than this?

A Well, generally, we had been in the development phases of making different types of glue-applicator units for the folding section. Also, the marriage of our folder to a flexo-press; the development of our high-speed folder -- high-speed taping unit, to be used in conjunction with the folder.

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These were projects that had priority, because we did have some of these already in the field, and were working on de-bugging them.

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Q When you got to build the first unit which had the general concepts, the principles shown in Exhibit 3, and delivered that to Mead -- Mead is a corrugated box company, isn't it?

A Yes, sir, it is.

Q How long did that unit stay at Mead?

A I can't testify to the length of time because I left Universal in 1971, in April, and at that point I believe the unit was still at Mead.

Q So in other words, some time -- if I recollect what you said, at the time that unit was delivered some time by the spring of '69 to Mead and it was still there when you left in April of 1971?

A Yes.

Q What is your present business?

A I have a management consultant firm and also design, machine designing.

Q Do you work in the corrugated machinery field at all since you left Universal?

A Yes, sir, I do.

Q Let's look some more at Exhibit 3, at the slapper plate, which you have identified, this eccentric that is put in and marked eccentric, that is for operating the slapper plate back and forth; isn't it?

A Correct.

Q The slapper plate itself is not directly mounted on that eccentric wheel, is it?

A No, sir.

Q It is pivotally mounted on a separate lever, the other end of which is on the center, which is not the eccentric center, is that right?

A That's correct.

Q Some kind of extension from that eccentric wheel has now moved up and down and moved that lever between the slapper plate and its own pivoted mounting up and down; is that right?

A Yes, sir.

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Q And because of the fact that that link or lever between the stationary mounting and the slapper plate happens to be a finite length, if you move down, the only place the plate can go is away from the blank; you move up, the only place it can go is toward the blank; is that right?

A Generally, that is true.

Q In other words, it is a mounting for the purpose of getting that slapper plate to hit the back end of the box after it enters the stack; isn't that right?

A True.

Q And to get away from it and come back and hit it again; is that right?

A Yes, through a pivoting action.

Q I didn't ask you about the pivoting action, did I?

THE COURT: Well --

Q You are well trained but just answer my questions.

A I am only saying what it actually does.

Q Now, is that truly a pivoting action? Have you an engineering degree?

A I have a certificate in mechanical engineering

from Rutgers University.

Q Is that a truly pivoting action? The rotation radial or spokelike rotation of a wheel around its center, does that slapper really have that kind of pivoting action?

A It is pivoted about a point which is considered to be its pivot center.

Q And it always -- whatever orientation it obtains with respect to that point, whether it moves up with respect to that point or down, with respect to that point its surface is always tangential to a circle drawn around that point?

A Well, the surface in this case is -- is not -- any one point would be tangential.

Q Obviously one point would be. I am talking about a plane, a plate.

A The entire surface is made up of -- of an infinite number of points, so therefore any one of those infinite number of points could be tangential to the pivot center.

The plate itself, the surface of that plate is not necessarily, but any one point --

Q Yes.

A (Continuing) -- along there, which has to be

considered.

Q But the surface of that plate actually can have a rectilinear motion at some point in its operation; isn't that right?

A I would have to actually look up the definition of rectilinear at this point to give you a definite yes or no.

Q You mean I have to define rectilinear for you?

A I think that it would be necessary, Mr. Faber.

Q Rectilinear is at some point a motion other than circular at some part of its movement in a straight line, at another part of its movement in a line at right angles to that straight line.

A I would have to say --

MR. WYATT: I object to that question as being ambiguous. But may I have that read back, your Honor?

THE COURT: Yes.

MR. FABER: There's differences between ambiguity and ability to understand.

I don't think it is ambiguous. If there is difficulty in understanding it, it is not my fault.

THE COURT: That is true.

MR. WYATT: I'm sorry, I just didn't understand it. May I -- if you will read it back for us.

(Question read.)

MR. WYATT: Is that your definition of rectilinear or is that from a dictionary?

MR. FABER: I just made it up.

Now --

THE COURT: You are trying to find out if that is a definition or not; is that what you are doing?

You are trying to find out if that is the definition or not?

MR. WYATT: Is that the definition of rectilinear from some book?

THE COURT: You can't prove it by me, that's for sure.

MR. WYATT: You can't prove it by me, your Honor.

MR. FABER: What?

THE COURT: You will never prove it by me.

MR. FABER: The real question is not

whether Mr. Wyatt happens to like the question but whether -- I am making a statement that the witness is able to agree with or not. If he can't agree it is not.

THE COURT: Okay.

THE WITNESS: I don't agree with that statement.

BY MR. FABER:

Q You don't agree. I haven't made myself clear. I am not asking you to agree with my definition of rectilinear. I have said that certain motions take place. Does the plate move that way? And your answer is?

A No.

Q All right.

MR. FABER: I think you should trust your witness more than you do, Mr. Wyatt.

Off the record for a minute.

(Discussion off the record.)

MR. FABER: All right. I'm sorry. Thank you for going off the record for a minute.

May I use your Exhibit 5-A?

MR. WYATT: Sure. Which one is that?

MR. FABER: It is the blow-up of 5.

MR. WYATT: Are you talking about the

other one? I understand.

THE COURT: Are we going to go to something else now?

MR. FABER: Yes.

THE COURT: Off the record.

(Discussion off the record.)

THE COURT: I think we will take a recess now for lunch. We should start around 2:00 o'clock.

(Luncheon recess.)

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AFTERNOON SESSION 135

(2:25 p.m.)

MR. BERLINER: Plaintiff's Exhibit 7 corresponds to Defendant's Exhibit 6 for identification marked November 5, 1970.

The same statement where Plaintiff's Exhibit 8 corresponds to Defendant's Exhibit 4 for identification marked November 5, 1970.

WILLIAM PULDA, having been previously duly sworn, resumed the stand and testified further as follows:

CROSS-EXAMINATION

BY MR. FABER (Cont.):

MR. FABER: May I continue?

THE COURT: Yes.

Q Now, going to Exhibit 5, and the blow-up Exhibit 5A, do you know what box blanks max and min in length Exhibit 5 was to be operated on?

A Just to clarify "in length," that is in the direction of flow, sir?

Q Yes.

A Approximately eleven-inch min and forty-eight inch max, I believe, was the sizes.

Q I notice that the reproduction of Exhibit 5A -- and I believe of Exhibit 5 -- is not a reproduction of

the entire drawing.

MR. FABER: Do you, Mr. Wyatt, have the entire original drawing for Exhibit 5?

MR. WYATT: You have the copy that we took at the deposition as part of your records.

In fact, you have it right in front of you.

MR. FABER: I would like the Clerk to mark for identification as Defendant's Exhibit C a part of a drawing.

THE CLERK: Marked for identification as Defendant's Exhibit C, a part of a drawing.

(So marked.)

Q I hand you Defendant's Exhibit C for identification and ask you whether there is any relationship between Defendant's Exhibit C and Plaintiff's Exhibit 5.

A This appears to be a portion of a drawing which -- to the left-hand side of that type of drawing.

Q Do you want to make any comparison so that you can say something more positive than "it appears to be"?

A Without any real identification number on it, I could not be exact about it.

It does appear as if it is that particular left-hand portion.

MR. FABER: Mr. Wyatt, would you please look at Defendant's Exhibit C and stipulate whether or not it is the part of the left-hand side of the drawing of Exhibit 5?

MR. WYATT: I so stipulate.

MR. FABER: Thank you.

I ask that Defendant's Exhibit C be received in evidence.

MR. WYATT: No objection, your Honor.

THE CLERK: Marked into evidence as Defendant's Exhibit C, one drawing.

(So marked.)

BY MR. FABER:

Q Using Defendant's Exhibit C, in order to refresh your recollection, what is the maximum length of box and minimum length of box that can be utilized in connection with the machine illustrated in Plaintiff's Exhibit 5.

A Minimum box size ten inches wide by ten inches deep. Maximum box size 55 inches wide by 53 inches deep.

Q What does the deep dimension mean?

A It refers to the direction of flow in a folding machine. In the same direction as the direction of flow.

Q Thank you. In connection with the machine

made in accordance with Plaintiff's Exhibit 5, you indicated and marked -- no, you didn't mark on that drawing. You indicated a lifting piston on Plaintiff's Exhibit 5A for the pusher plate; is that right?

A For the cylinder that the pusher plate is mounted to, yes, sir.

Q In other words, then, the cylinder which pushes the pusher plate is the one to which the letter Q is now directed; is that right?

A Yes, sir.

Q And the cylinder which lifts -- that first-mentioned cylinder which carries the pusher plate is the one to which the letter T or U is directed; is that right?

A T, I think, would be correct.

Q T?

A Yes, sir.

Q And U is the pivot for T?

A That's correct.

Q The cylinder T, in addition to providing the means for lifting the pusher plate, also provides a counter-balance for the pusher plate; does it not?

A Specifically for the system.

Q Actually, there is always present a certain amount of compressed air under the piston rod of the lifter

cylinder in order to provide some support for the pusher plate system; is that right?

A Yes.

Q Therefore, that is present for the effective purpose of reducing the apparent weight of the pusher plate as it comes down -- the apparent weight of the pusher plate system; is that right?

A Qualifying that: Under static conditions.

Q And actually now, when the -- by thus counterbalancing the pusher plate it is now possible for the stack of blanks actually to lift the pusher plate without damaging the top blank in the stack; is it not so?

A I would tend to qualify this answer. Again, it depends on whether the thing is in a static condition or in motion.

When do you mean that this should happen?

Q When the pusher plate is either going forward before it has been raised by the lifting piston --

A In its forward stroke?

Q Yes.

A I would say that it does not rise during that portion of the stroke.

Q But the whole system is counterbalanced by the lifter piston so that the pressure of the bottom of the

pusher plate on the remainder of the stack is greatly reduced over what it would be if it were not so counterbalanced; is that not so?

A Only statically.

Q Does that not -- doesn't that also occur, and doesn't that counterbalancing condition exist at the time the pusher plate is pushing the stacks forward?

A No, sir, it doesn't.

Q You mean that the cylinder, the lifter cylinder does not have any pressure behind the piston rod at that time?

A I didn't make that statement. You are making that statement.

Q Actually, the piston cylinder does have pressure behind the lifter rod during that forward stroke of the pusher cylinder; isn't that right?

A It does, but it is not counterbalanced.

Q But it does have lifting pressure under that piston rod?

A Yes.

Q And the force of that lifting pressure under the piston rod actually reduces the force with which the pusher plate and its whole system is bearing down on any surface on which it is resting at the time; isn't that right?

A It reduces to some degree.

Q You testified in connection with Plaintiff's Exhibit 3 that the relatively much lesser weight of the vertical cylinder pusher plate could scratch the blank during part of its return stroke; is that right?

A Correct, sir.

(continued next page)

Q Is that one of the reasons that the counterbalancing -- is that one of the reasons the lifter cylinder is also made a counterbalancing cylinder in the case of the exhibit 5 structure?

A No, sir, that's not the reason.

Q But that is a result, is it not, that you actually reduce the effective apparent pressure or weight of the bottom surface of the pressure plate, by reason of that structure?

A Again, only under --

THE COURT: Will you excuse me a minute, please?

(Recess.)

MR. BERLINER: Plaintiff's Exhibit 9 corresponds to defendant's Exhibit 7 marked for identification on November 5, 1970.

Plaintiff's Exhibit 10 corresponds to defendant's Exhibit 5 marked for identification on November 5, 1970.

Plaintiff's Exhibit 11 corresponds to defendant's Exhibit 11 marked on November 5, 1970.

Defendant's Exhibit C corresponds to defendant's Exhibit 22 marked for identification on November 16, 1972.

MR. FABER: Would you please read the last question?

(Question read.)

THE WITNESS: Again, only in a static condition.

MR. FABER: He keeps saying only static condition.

Tell me what you mean.

THE WITNESS: Static, your Honor, means when the pusher is not in motion. It is a solid--a steady state condition. At that point the system is somewhat counterbalanced. But during the period of time that the pusher starts its forward motion, this is no longer true. The counterbalance is no longer true.

Q There is still, however, pressure on the lifting side or underside of the lifter cylinder piston at that time?

A Correct.

Q During the forward motion?

A Correct.

Q And there is pressure on that underside or lifting side even during the return as you are lifting it up?

A Correct.

Q Actually, there is the same pressure on the underside or lifting side of this cylinder during the forward motion when you are not lifting it up and during the return motion when you are lifting it up, isn't that so?

A Yes.

Q Exhibit 5 is a drawing of a unit which was actually made and sold in a quantity of more than one, is that right?

A Yes, sir.

Q We have an indication of a distance for a seven inch stroke of the pusher on Exhibit 5, is that right?

A Yes, sir.

Q Now, using that seven inch dimension as a base, or the scale marking on the drawing, can you tell us the length of the blanks in this stack?

You ought to look at Exhibit 5 directly, unless you can see it from Exhibit 5A.

A I believe I can see that fairly well, thank you.

Q What is the length of the blanks in the stack?

A Proportionately, it is somewhere in the area of about maybe twenty-five inches or so; somewhere in that range.

Q Looking at the bite of the belts coming off the folding machine on the right and the two rollers at the end of those belts and the bite between the two rollers that

first feed the blanks to the understacker -- do you want to scale it off or make a very wide range educated estimate of the distance between the center points of those bites?

A I would "guestimate" in the relative area of about ten, eleven inches.

Q So that now you have already told us that the pusher plate of Exhibit 3, during the return stroke, could scratch the top of the box -- you've already told us that, haven't you?

A Yes.

Q In Exhibit 5, to avoid such tearing of the box, or scratching of the box by the abrasive folding machine plates, a sample of which we have seen -- folding machine belts, a sample of which we have just seen, isn't it necessary for the longitudinal speed of the belt run in contact with the blank and the peripheral speed of the feed-in roller for the stack to be running at the same peripheral speed?

A No, that's not altogether true.

Q You mean they can run at different speeds?

A Absolutely.

Q How much different speeds?

A It could be as much as fifty percent difference in speed.

Q Now, just let us -- fifty percent difference -- which would be a greater speed and which would be the lower speed?

A It's possible that the understacking drive could be operated faster than and in very rare cases, slower than.

Q We are talking about the peripheral speed of the roller?

A That's correct, sir.

Q So that is the speed that will be imparted to the blank?

A That's correct.

Q All right. Now, when the feed-in rollers for the understacker are operated at a greater peripheral speed than the longitudinal speed of the belts, does that mean the stacks, the blank entering the stacker is yanked out from the bite between the two folding belts?

A It means that there is a slippage that takes place between the belts in contact with the material, with the folded blank and the blank itself.

(Continued on next page.)

Q And is the slippage between the belts and the blank, or between the feed-in rollers of the understacker and the blank?

A Generally, from my observations, it occurs mostly in the slippage -- slippage occurs mostly in the folding section, although it's possible, depending on the setting, it is possible depending on the setting of the pull rolls, that some slippage does also occur there.

Q When I show you Defendant's Exhibit A, you will notice that Defendant's Exhibit A has a smooth side and a rough side. It is the rough side of the belt that is in contact with the box, is that right, during the folding operation?

A That's correct.

Q And looking now at Exhibit 5-A, it is the rough side of both belts that is in contact with the box at that point?

A That's correct.

Q Now, actually, if you run these folding belts and the feed-in rollers for the stacker at different speeds, then there has to be slippage, isn't that right, or the box would tear apart?

A That's correct.

Q So that when you run at different speeds, you

rely on the fact that the box is between those rollers to make sure that the box is still moving at the same speed that it has been moving, isn't that right?

A Not necessarily so.

Q If the box is not moving -- If the front end of the box is moving slower than the back end, your box collapses.

A I didn't say that, sir.

Q I'm asking you another question. Correct?

A If the front end is going slower than the back end, it will collapse, you are right.

Q And if the front end is going faster, it will tear apart; is that right?

A Correct, sir.

Q So that if you have a difference in speed, you are relying on the fact that the box has sufficient strength to cause slippage somewhere as it goes from one section to the other, isn't that right?

A Generally, that is a true statement.

Q Now, in this case, you are very clear that there are different peripheral speeds for the folding belts and the feed-in device of the stacker -- You are very clear on that.

A That's right.

Q Do you remember testifying otherwise about a year ago?

A Would you like to read my comments, sir?

Q I am asking you whether you remember?

A At this point I had suggested that it could be run one to one, it could be run slower, or it could be run faster. Those are my comments.

Q I don't have an extra copy of it. I will read it to you, and then I will let you look at it.

On page 31 of the deposition that was taken of Mr. William F. Pulda, on November 5, 1970, starting three lines from the bottom, and then continuing on page 32:

"Question: In the lower right hand portion of the Defendant's Exhibit 9 for identification, Mr. Pulda (that then Defendant Exhibit 9, corresponds now to Plaintiff's Exhibit 5-A), you have the notation 'adjustable lower pull rolls, both up and down.' Are these pull rollers driven?

"Answer: That is correct.

"Question: What is the speed relation between these rollers and the speed of belt P?

"Answer: For all practical purposes, they are one to one."

I hand you my copy of that deposition, and ask you

whether those answers were given by you to those questions on pages 31 and 32?

A I gave those answers, yes, sir. I think that what should be pointed out here, sir, is that P is the conveyor on the understacker, and not the folding belt. So therefore, they are one to one with relation to each other.

Q Very good. In other words, this is the conveyor of the understacker, this continuous belt P?

A That's correct, sir.

Q And that must run at the same speed as the folding belts.

A I did not say that, sir.

Q What did you say?

A I said that it runs the same speed as the in-feed rolls.

Q As what?

A The adjustable pull-roll section.

Q Those must run at the same speed, must they?

MR. WYATT: I object to the question now as being ambiguous. Same speed as what, Mr. Faber?

THE COURT: All right.

MR. WYATT: It is ambiguous unless you

identify the same speed as what?

Q The peripheral speed of the pull-rolls, that is, the feed-in rolls for the stacker must be the same as the longitudinal speed of the belt P; is that right?

A I believe my statement was, for all practical purposes, they were a one to one relationship.

Q Is it possible for them to be variable, or vary within certain limits with respect to each other?

A It's possible that the conveyor P could run slightly faster than the adjustable pull-rolls.

Q And that means then that you will have to have a sliding relationship with respect to the box?

A This is very true. And that's what we do have when the box comes to rest in the lower portion of the stack against the stopping plate.

Q Is it also true that a conveyor P is relatively a very smooth surface conveyor, as for instance, compared to the surface of the folding belt here on the far right side of the drawing, Exhibit 5?

A It just so happens that the original machines, or the prototype, did use that very belt you have in your hand for this stacking conveyor P at the Mead plant in Edison.

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(continued on next page.)

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Q That was the Exhibit 3 structure?

A Yes.

Q Which you are not looking at now.

You are looking at Exhibit 5; is that right?

A Yes.

Q Is that one of the things that might have gone wrong with the Exhibit 3 structure at the Mead Plant?

A No, it is not.

Q Now, with the blank moving from the folding section into the stacking section, and the blank not being collapsed, and the blank not being stretched apart and torn during this movement, do you have a front and rear end of the blank, the front being already entering the stacking section in the rear structure on the folding section, the rear stuck on the folding section?

Do you have them working together? And in synchronization with each other?

A I think you will have to clarify what you mean by working in synchronization.

Q- You have already told us that the front does not pull away, or you tear the blank, the front of the blank does not go slower or you collapse the blanks, so they are moving together, the front and the rear?

A The front and rear of the blank obviously are connected

together.

Q And they are moving together and obviously at the same speed, or otherwise, you would have blank breaking mechanism rather than a blank feeding mechanism even though the rear end of the blank is caught in the folding section belts and the front end of the blank is entering on the feed stack; is that right?

A There is a slippage taking place between the surface of the folding blank in the area of the discharge end of the folding section and perhaps as mentioned, if misadjustment on the pull rolls, a slippage can take place there also.

Q That slippage is by design so you don't tear the blank apart?

A In some instances, it is.

Q So you don't tear the blank apart, or collapse it up; is that right?

A Yes.

Q And for that purpose, you have got to have a relationship between the machine, such as a folding machine that you are taking the blanks from and a machine, the understacker, to which you are feeding to avoid collapsing or tearing your blank; is that right?

A That relationship could be a random condition and is not likely to give us any problem whatsoever.

Q I am glad you added the other part, but then there has to be that relationship between the machine so that the blank will at least move as a single unbroken unit from one to the other.

Is that right?

A Yes. There is slippage that takes place.

MR. FABER: I believe I failed to mark Defendant's Exhibit B in evidence.

THE COURT: All right, we will mark it now.

MR. FABER: I wish to have it done now.

MR. WYATT: No objection.

THE CLERK: Defendant's Exhibit B marked into evidence.

MR. FABER: And C.

THE CLERK: C has been marked into evidence.

Q Now, I would like you to refer to Plaintiff's Exhibit 7, a photograph, and 7A.

THE COURT: While you are looking for that, I will step out for a minute.

(After recess.)

Q All right, now, we have Exhibit 7 up there. On Exhibit 7, do you see a conveyor equivalent to the conveyor P that we had on Exhibit 5?

A Yes.

Q It is sticking out down here; isn't it?
A Yes.
Q And P is actually a bunch of separate sort of belts; is that right?
A Yes.
Q So the belt P in this photograph 7 of Exhibit 5 structure is a nice small belt, is that right?
A No, I wouldn't say that.
Q Is it rough like the belt piece of defendant's Exhibit A?
A It is a good possibility.
At this point, I cannot identify what type of belt was on there, and we did go through a series of different type belts on that machine.
Q Would you --
MR. WYATT: What machine are you talking about?
THE WITNESS: The prototype machine at Mead Container.
Q Is this Exhibit 7A, a picture of the prototype?
A Yes.
Q How about taking a look at the best print of the photograph, that is in evidence, and tell us what that bottom belt happens to have, whether that bottom belt happens to have a nice rough surface, like Defendant's A or is much

smoother?

THE COURT: You can tell it is corrugated and not the same type.

Here it is right here. It is a corrugated sort of thing.

MR. FABER: We are on different pictures.

THE COURT: But it does not show in that picture. That is the same machine.

THE WITNESS: That is not the same.

THE COURT: This is the prototype and this was made afterwards.

MR. FABER: Here is the same machine. That doesn't look very corrugated.

MR. WYATT: To clarify plaintiff's Exhibit 10, it is a good shot of the belts on the under feed, your Honor.

THE COURT: That is the one I have right here.

MR. FABER: I want to tell you what you can see.

THE COURT: You can see it here.

Q This is a nice smooth belt.

A At this point, there are four belts that are visible. The one closest to me in this picture appears smooth.

MR. WYATT: What Exhibit is that?

THE WITNESS: This is Plaintiff's Exhibit 10. The belt it shows in this picture perhaps four belts that can be seen.

THE COURT: I see them.

THE WITNESS: The one closest to the lower portion of the picture shows a white -- a whitish surface and appears smooth. The other three belts show a black surface and could very well be a rough material as shown on that belt.

THE COURT: Similar, anyway?

THE WITNESS: Yes, sir.

At this point, it is difficult to determine and there is a rate of wear that takes place, such as that you cannot really tell if it is in a new state.

Q Actually, those belts on the, in the stack, are actually smooth belts, so that the belts can be slid right onto them very easily; isn't that right?

A No. To the contrary, these belts, as of the last machines being produced at Universal, when I left Universal, this is all I can speak for, they were a belt that had a longitudinal groove molded into the surface for the purpose of creating a greater friction to pull the box in and not to allow the piece to be slid in underneath. The belts

actually bring the box in and not necessarily allow the pullrolls to do the work.

Q And that means by yanking the box in, it would have to yank the box out from between the two folding belts in the folding machine that is biting down on the blank; is that right?

A There is a slippage that takes place in that area, as I had pointed out in the previous testimony.

Q The slippage is at the folding belt, is that what you say?

A It could very well occur at that point.

Although, I pointed out, it is possible to occur at the feed roll, depending on the tightness of the knit at that point.

Q Having told the court that you didn't want this light Fischer plate that was loosely supported scraping across the top of the box because it would ruin it, you were perfectly willing to pull the box past the rough surface on the two belts on the folding machine section; is that right?

A I think I have already mentioned that the belts were set up in such a condition that it allowed for slippage in there.

Q Well, you have been very careful to use the word pivotal in the slapper plate and very careful not to

use the word reciprocal. Actually, the slapper plate moves back and forth as far as the box that is hitting it is concerned; is that right?

A It pivots back and forth, yes.

Q I just want you to answer me, does it or does it not move back and forth, as far as the box that is slapping is concerned?

MR. WYATT: I object. He has already answered it.

THE COURT: I will allow it.

You may answer it again.

THE WITNESS: It moves into and out of contact with- the box, yes.

Q Now, I want you to answer my question and if you cannot answer it yes or no, just say you cannot: Does it move back and forth with respect to the box which is slapping or squaring?

A Does the back and forth of any direction apply to it in your question, sir?

Q If you cannot answer the question, say you cannot.

A It does move back and forth.

Q Did you have an S&S machine before you at the time you were trying to devise the machine of Exhibit 3?

A Before me, no.

Q Did you look at one? Did you have it before you?

A No.

Q Did you receive in the course of the design that you made, any specific instructions for Mr. Lopez or Mr. Ley about what the design parameters should be?

A Yes. I think we discussed general design parameters.

Q All right.

What did Mr. Ley, not discussion, as far as you can remember, eight years ago, what did Mr. Ley tell you about those design parameters and what did Mr. Lopez tell you about those design parameters?

A We were locking for an in-line compact stacking and straightening type bundle ejector. The method of producing this was left somewhat to my discretion as to how we accomplished the, or achieved these ends. At that point, I had come up with perhaps two or three possibilities which were sketched up and through discussions we narrowed it down to generally the form that was shown in the prototype.

Q Were you instructed to work from the S&S machine as a starting point at least?

A No.

Q But at that time, what you had was the stacker which changed direction as it put the --took the blanks off the folder. Is that right?

A We had a bundle ejector which was a gravity type, as I explained.

Q In Defendant's Exhibit B, the universal bundle ejector, I guess you call it, in that Section 2, did you have any means for straightening up the blank?

A No.

Q The blank came off the folder and then went from Section 2 into Section 3, without being straightened out?

A That is correct.

Q But then you straightened it up in Section 3; is that correct?

A Yes.

Q That was the reason for the existence of Section 3, to provide means for straightening the blank, the box up; isn't that right?

A That is one of the reasons.

MR. WYATT: Your Honor, I object to this. This is about the third time we have been through this common ejector today.

THE COURT: Yes.

MR. FABER: All right.

Q Does the folding machine, the Universal folding machine use the connection with the underfeed stacker of Exhibit 3 or Exhibit 5, always produce perfectly folded blanks?

A No.

Q So that some means of squaring up the blank is needed beyond the folding machine; isn't that right?

A That is correct.

MR. FABER: I am sorry, that repetition was only preliminary to this.

THE COURT: All right.

MR. FABER: I am about three minutes from the end, but I just want to read the notes of my committee.

Q Did you ever see an S&S underfeed stacker of the type here involved prior to your entry into the design of Universal underfeed stacker?

A Of the patent in question?

Q Yes.

A Never.

Q Just to make it clearer, did you ever, prior to entering into the Universal design see an S&S underfeed

in line stacker at the end of a folding machine?

A Yes.

Q Did you know how it worked when you saw it? Was that explained to you?

A I believe I mentioned in my previous deposition that I had seen the machine at a plant, Kraft Corrugated, in Bayonne, New Jersey, and it was adjacent to our-- one of our folder gluers and I was in the plant at that time on a problem concerning the Universal folder, gluer, and only by way of passing did I see this piece of equipment.

Q You did not get a chance to examine it in detail and find out how it worked?

A No.

Q Did Mr. Ted Ley tell you to design an in-line stacker, or did he leave all the design problems to you?

A After the initial sketches were narrowed down to the general prototype as shown on the schematic drawings, the rest of the design parameters were left to my department.

Q And who did the narrowing down, the group, Ley, Lopez and you?

A Between Mr. Ley, Mr. Lopez and myself.

Q That group decided it be an in line underfed stacker; is that right?

A Right. And the three units in quesiton were of that

type.

Q Do you happen to know Mr. Ley's work experience before he became Mr. Universal?

MR. WYATT: I object.

MR. FABER: I withdraw the question -- I am sorry, I don't withdraw it.

THE COURT: I sustain it.

Q Do you happen to know Mr. Lopez's prior work experience?

MR. WYATT: I don't know, he may.

THE COURT: He can say whether he knows. Do you know?

THE WITNESS: Only through hearsay, that Mr. Lopez had worked at S&S at one time.

Q So did Mr. Ley, didn't he?

A I presume this is a true statement.

MR. WYATT: Your Honor, may I say for the record, back in World War II, both Mr. Ley and Mr. Lopez worked for S&S and this is all in the deposition. We so stipulate it.

MR. FABER: There are other witnesses for that.

THE COURT: All right, wait until Lopez comes in.

Q Let me ask you with respect -- I think we can remember Exhibit 5 without looking at it, that seven inches stroke of the pusher?

A Yes.

Q You say that is real quick, don't you?

A Very rapid.

Q Suppose you got -- that Exhibit 5 said we can use blanks as short as ten inches in that longitudinal direction; is that right?

A Yes, I believe that the specification does call for that. I don't know if it ever was able to be accomplished.

Q But it does say so?

A Yes.

Q When you are not sure it wasn't able to accomplished, because what you remember is 11 inches, is the smallest one?

A I think so, yes.

Q Do you have any idea how fast that pusher came out and went back in fractions of a second?

A I never made any precise measurements of time, but it was a very, very rapid stroke.

Q Now, you have got, the box blanks of various types of services depending on how much ink is put on, what

coloring is put on and what finish is used; is that right?

A Yes.

Q Some of those services are very slippery, and some are not; is that right?

A It could be.

Q Well, it is or it isn't?

Isn't it right that some are quite slippery?

A True.

Q If you eject with a very rapid, rapid stroke, 25 boxes on top of a very slippery surface, what happens to those boxes?

A Relative to this machine, or relative to any condition?

Q We are talking about this machine, relative to this machine.

A They would reach a point of the vertical conveyors and be pulled out.

Q They wouldn't be sliding or spilling or falling over with respect to each other?

A The stack as being developed in the machine is guarded between sideguides from the side of the blank contained between the front stop and the trailing edge pivoting slapper plate as they rise, and the forward motion would be contained between the side guides and your pusher at the rear so that

until they enter the vertical belts generally, there shouldn't be any displacement between the sheets that are being displaced forward.

Q There shouldn't be, but there couldn't be?

A I have never seen this, Mr. Faber.

MR. FABER: May I have thirty seconds?

THE COURT: Yes.

MR. FABER: That is all, thank you.

MR. WYATT: I have a few short questions.

THE COURT: All right, let us finish with him. He has a few questions.

REDIRECT EXAMINATION

BY MR. WYATT:

Q Mr. Pulda, when you were describing the prototype device, you described the pusher plate being slidable on a backing plate?

A That is correct.

Q In the production model shown in figure five A, is the pusher plate mounted to a slider backing?

A No, it is not.

(Continued on next page.)

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Q Will you tell me how it is mounted?

A It is permanently fastened to a plate which was mounted directly on the rod end of the pusher-cylinder marked Q.

Q Can we say it was rigidly mounted on the end of the piston rod?

A In effect, it was rigidly mounted.

Q And it did not slide up and down the way the prototype did?

A It did not.

Q In reference to the horizontal motion during the forward stroke of the pusher in the production model, what retains it in that horizontal posture as it goes forward, during the pushing stroke.

A During the pushing stroke, the pusher plate remained in a completely horizontal position due to, number one, there is no blanks entering at that point, and, number two, there is a reacting force from the blanks that are being exited through the -- displaced to the vertical drive roll section which caused the pusher plate to remain in a horizontal position.

Q What about with reference to this second pneumatic piston you referred to, is there any function there as to maintaining the pusher plate in a horizontal

posture?

A There is air pressure on the top portion of the piston to maintain the horizontal position, also.

Q Is there also a counter-balance pressure on the bottom portion of the piston?

A There is a pressure on the bottom portion of the piston, but it is counter-balanced in its static position.

Q So that it just remains in a horizontal position as it moves forward?

A That is correct.

Q If you put a pressure underneath the pusher plate in an attempt to push it up, what force would react against an upward movement?

A There are a number of forces that would react against the upward movement at this point:

Number one, it would be the force of acceleration which, in order to move a mass that is rapidly moving in an upward direction quickly --

Q You mean upward or forward?

A You asked what force would be required to move it upward.

Q Right.

A I am saying it is a very high force that is required at this point, if at all possible. And that force would be

the force of acceleration to change motion here, to the change of motion. And at this point, there is no force induced by the load, the stack in there or any boxes coming in there, so, therefore, there should be no change in position.

Q Would there be any force created in this piston to hold it in a horizontal position against this upward force?

A There is a force created by the upper air pressure being applied to the piston T.

Q And that force is a downward pressure by that piston?

A Downward.

Q And do these same forces act -- Please, may I strike that, your Honor.

In reference to this stroke of the production device shown in Plaintiff's Exhibit 5-A, I notice it has a stroke between two positions that I believe is marked "as a seven inch stroke."

Would you explain that stroke to the Court, just what actually happens there?

A The actual length of that stroke is not the actual displacement that takes place on the pile or the box, the bundle that is being displaced.

Only approximately five inches of that total seven inch stroke is being applied to the displacement of the bundle. The reason for it being that physically we required through the pivoting motion a clearance for the front edge of the pusher plate to return to its home position and not strike the oncoming pile being built up.

Q You say five inches. In effect we have two inches of travel.

A Pre-travel.

Q Before you get to the pile, and then it's five inches over the pile?

A Correct.

Q So if you had an eleven inch box in there, that pusher plate would have moved less than half the distance over the box in pushing it off; is that correct?

A That's correct, sir.

Q This Universal unit shown in both Plaintiff's Exhibit 5-A and the prototype shown in 3-A, would you tell me what its relationship is to the folder-gluer?

A Of course, it is a completely independent piece of equipment and is not attached physically to the discharge end of a folder.

It can be utilized with a folder, or it can be utilized with a feeder of any type. It can be utilized with competi-

tors' equipment, folding equipment, also.

Q Tell me, would you tell the Court what happens if the machine keeps running, the folder-gluer keeps running, and the understacker keeps running, but there is no feed of blanks in, what happens then?

A Even though the belts are turning and there is no periodic movement of the pusher plate, because there just is no material coming in to be pushed off --

Q Can we say the pusher plate does not operate just because the machine keeps running?

A That's correct, the pusher plate does not operate unless material is entering the machine.

Q And just a final question. In reference to the Universal Comet Understacker, can you tell me, were those devices still being sold -- were they still being sold at the time you were at Universal?

A Yes.

Q That is with reference to Defendant's Exhibit B?

A Right. With reference to this Exhibit, these machines were still being sold, and one of the reasons is because this machine had more versatility than the newly-developed understacker.

This machine could handle boxes that the understacker

could not handle, such as die-cut boxes, or irregular shaped boxes, and it also served as a better -- giving a better finished quality product than the other machine.

Q By die-cut boxes, you mean boxes that don't have a uniform leading and tailing edge, is that what a die-cut box is?

A Correct. The leading and trailing edge has an irregular shape and therefore would not function correctly on the understacker.

MR. WYATT: I have no further questions, your Honor.

THE COURT: Do you have any further questions?

MR. FABER: I have to clean up a few things.

(continued on next page.)

RECROSS EXAMINATION

BY MR. FABER:

Q Pointing at the lower lefthand corner of Exhibit 5, is this the general area of the drive?

A Yes, sir.

Q For the underfeed stacker?

A Yes, sir.

Q And between this drive element and the drive for the folder, do you have an electrical interlock so that when one speeds up, the other will speed up?

A There are two methods of operation on this machine.

THE COURT: Do you have it in that one, an electrical interlock? That's all he wants to know.

THE WITNESS: Yes.

THE COURT: All right.

Q And this counter-head on the folder is for the purpose of operating a part of the under-fed stacker, isn't it?

A Yes.

THE COURT: Step down. Thank you.

(Witness excused.)

MR. WYATT: May this witness be excused,

your Honor?

THE COURT: Yes.

(Recess.)

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THE COURT: How many witnesses do we have?

MR. WYATT: We will have a total of three. We will have Mr. Fisher and then our third and final witness.

THE COURT: How many do you have?

MR. FABER: We expect to have two, your Honor.

THE COURT: We have to finish this case by Friday. It must be finished.

MR. FABER: We still have Mr. Fisher. Do you want to defer him?

MR. WYATT: I would like to call Mr. Palli.

THE COURT: We have tomorrow to work. Friday is a busy day around here. Monday is a holiday and Tuesday I have back-to-back criminal cases, jail cases that have to be tried over every other case.

All right.

(Continued on next page.)

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C H R I S T O P H E R P A L L I, called as a witness, having first been duly sworn, testified as follows:

THE COURT: Any other witnesses from out of town besides Mr. Fisher?

MR. FABER: Yes.

MR. WYATT: Your Honor, Mr. Palli was with us when your Honor examined the machine.

DIRECT EXAMINATION

BY MR. WYATT:

Q . Mr. Palli, would you please state very briefly your education and background, please?

A I have a Bachelor of Science in Mechanical Aero-engineering from Pacific Coast University, 1942.

My experience in printing presses and material handling begins with the Kline Electric Company in Chicago, Illinois, from April 1954 to July 1958. I was manager of mechanical engineering there.

From August of 1958 to December of 1960 I was advisory engineer to Continental Can Company, responsible for design development of metal decorating, presses and converting equipment for metal sheets.

From January 1961 to July 1965 I was manager of research and development for the Goss Company in Chicago, Illinois, responsible for design and development of printing

presses, for newspapers and magazines and also for material handling of magazines and newspapers.

From August of 1965 to November of 1966 I was chief engineer for Ashton Press Manufacturing Company in Montreal, Quebec, Canada, responsible for design and development engineering for business forms, presses, collators and material handling of business forms.

From January 1967 to July 1970 I was staff engineer at the R. Hoe Company in the Bronx, New York, responsible for design and development engineering of printing presses and material handling systems for newspapers and magazines.

From late July 1970 to May 1971 I had my own business, CYN Co. Simkan in New Jersey where we designed and developed special paper converting machinery for packaging, material handling systems.

From June 1970 to the present I am chief engineer for the Koppers Company, the Universal Corregated Box Machinery operation in Cranford, New Jersey, and I am responsible for design and development of finishing equipment for corrugated boxes.

Q Are you familiar with the design of the Universal understacker shown in plaintiff's Exhibit 5A?

A Yes, sir.

Q Is that the type of understacker thatwas being

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manufactured when you arrived at Universal?

A Yes, sir.

Q Did you subsequently come up with a modification to that design?

A Yes, sir.

Q Would you tell us what that modification is, just generally, from a description of figure 5, will you point out to the Court, and may Mr. Palli step down from the stand to point out what the similarities and what the differences are in this new understacker?

A Your Honor, on this production machinery which has basically a conveyor system, a backplate, a pivoting slapper, a pneumatic pusher with a fixed plate which displaces just the top of the machine --

Q The top of the stack?

A The top of the stack. And a set of vertical drive rollers which remove the top of the stack out of the machine.

We had in this design a second pneumatic cylinder which pivoted the main pusher air cylinder arcuately on its return path. This system required considerable skill in setting and maintaining.

We replaced this system with a mechanic device which is shown in that exhibit.

Q Just refer to 5A and we will get to that in a

moment.

What did you replace in 5A?

A We replaced the second pneumatic cylinder shown at item T.

Q In Exhibit 5A?

A In Exhibit 5A.

Q And Exhibit 5A, that second pneumatic cylinder, what was the function of that cylinder?

A This second pneumatic cylinder pivoted the main pusher pneumatic cylinder arcuately on its return track.

Q What did you replace that cylinder with?

A We replaced this second pneumatic cylinder with a mechanical --

Q Just explain what it is you replaced it with?

A With a mechanical device.

MR. WYATT: Would you mark as the next Exhibit, Exhibit 12, a drawing of a mechanical lift mechanism.

THE CLERK: So marked.

(So marked.)

MR. WYATT: Would you mark a blow-up of plaintiff's Exhibit 12 as plaintiff's Exhibit 12A, a blow-up of this mechanic lift unit?

THE CLERK: So marked.

(So marked.)

Q Mr. Palli, would you explain to the Court just what this mechanical lift mechanism is, shown in plaintiff's Exhibit 12, in that diagram?

A This mechanical device serves the same function as did this second pneumatic cylinder, in that it pivoted the pusher pneumatic cylinder arcuately on its return path.

(Continued on next page.)

Q Would you describe to the Court how this actually functions with reference to the specific details of this diagram 12A?

A In Exhibit 12A we show a cam roller, and this roller is attached to an arm which extends downward and carries a fixed pusher plate which is attached to the pneumatic cylinder. When a signal from the counter is received that the total count has been achieved the air cylinder is activated at which time this roller attached to it, to the pusher, fixed pusher, starts to move this roller out on this track and being restrained from upward movement by its fixed top track and this pivot arm here . On the movement outward this roller moving along and in this space here, when it reaches this point it contacts this pivot lever raising it to allow the roller to go by. When the roller gets to the tip of this pivot arm it is in its extended position, being restrained downward by a spring and this pivoting gear will now close with the roller on the outside position.

At this time the cylinder had the pusher cylinder and has gotten to its extreme limit and it will start back and the roller will now start rolling up the incline ramp, up to the top here onto the fixed portion returning backward down the ramp and dropping to this finger which is spring-activated and softly letting it down and the roller and the

pusher plate to its original position is down.

Q While this roller makes this travel as you described here horizontally from here to here and comes back and rides up this ramp, what type of motion does the pusher plate go through?

A It goes through a pivoting motion.

Q Why? Refer to figure 5A.

A The pneumatic pusher cylinder is still pivoted in its back position here.

Q So what this cam device does is to allow it to roll back up to the position so it moves upward in a pivoting or arcuating motion?

A Yes.

Q Explain to the Court what happens when this pivoting arm you have described here is moved upwardly as the roller pushes it up. Give us the details of that construction?

A In the diagram this piece A53701 is affixed up here in the ramp. This lower piece is also rigid. This distance between here is a fixed dimension slightly over the size of the roller to allow the roller to pass through without seizing or interrupting it but not allowing it to move appreciably up. When it starts to move the finger in the design --

Q Will you write finger on there so it is understandable? Write what you described as the finger.

Mr. Pali is indicating the finger is the item marked A5732 and he has written the word "finger" on there.

Q What happens when that finger rotates upwardly with relation to this structure in here?

A When this finger rotates up due to the motion of the roller coming under it, it is stopped in its upper movement by a projection on the front side of the fixed ramp, A57301.

Q What is the result of the fact that it hits thatprojection?

A This projection is to restrict the upward movement of the pivoting finger so that as this roller is moving it continues tomove forward to the extreme outward position of the pusher pneumatic cylinder and it will not and cannot move in an upward direction.

Q That is because this finger will only rotate to generally a horizontal position and restrains upward movement of that roller until the roller passes to the left of that finger as you view it in 12A?

A Yes.

MR. WYATT: Please mark this as plaintiff's Exhibit 13 and 13A.

Q I ask you to refer to the photograph of

plaintiff's Exhibit 13 and tell me what that is.

A In plaintiff's Exhibit 13A we have a side selvation and large photograph of the understacker fitted with the new mechanical device called cam track device.

Q Tell us the device shown in plaintiff's Exhibit 13A fundamentally, whether it is the same device as shown in 5A, the production device, except for this cam track you referred to?

A Yes. Everything in the machine with the exception of the cam track is the same.

Q Please continue.

A We have conveyor systems which brings the blank into the hopper and we have a pivoting slapper and we have the front plate and we have a pusher, pneumatic cylinder with a fixed pusher plate and back here we have our vertical drive roll device, one on each side of the hopper.

Q Point out where the pivoting finger is with the roller and show how it is attached to the pusher in Exhibit 13A.

A In this photograph the cam track mechanism is shown above and slightly ahead of the pusher, pneumatic cylinder and above the hopper up in here. This is the cam track. In the device there is a cam roller attached to the vertical strut which is fixed to the backside of the pusher plate rigidly and this is the bottom track fixed with the cam

roller moving out. This is the upper track and restraining track to restrain the cam roller in the track as it moves forward.

Pivot point for the finger, here, and this pivot finger goes up as the cam roller moves out to the extreme position when the pusher has displaced the top portion of the stack. It is shown down. The roller will move up and to the rear as it goes over the top fixed track and will drop down into its original start position back here.

MM/td
4p/2

MR. WYATT: Please mark Plaintiff's Exhibit 14 and 14A a blowup of that photograph.

Q Would you explain to the Court briefly what photograph shows?

A Plaintiff's Exhibit 14 A is an enlarged photograph showing the exit and elevation of the understacker in the mold that we displaced on the side elevation of the previous Plaintiff's Exhibit. I point out the elements: This is the pusher as viewed from the exit end. This is the stack in position and these are the vertical drive rollers each having a second constant speed drive motor to drive the vertical rows on each side.

MR. WYATT: Please mark Exhibit 15 another photograph of the Universal production device and Plaintiff's Exhibit 15A a blowup of the photograph Plaintiff's Exhibit 15.

Would you please explain what that photograph is to the Court.

A Plaintiff's Exhibit 15A the blown up photograph shows a side elevation of the stacker -- the understacker with the pneumatic pusher cylinder almost completing its stroke and displacing the top of the built up stack. You notice the roller in the cam track has moved out almost to the end of the stroke, and we show how the pivot beam gear

has raised up to the position and in this position it will not allow the cam roller to roll up when it is moving forward.

MR. WYATT: Please mark Plaintiff's Exhibit 16A a blowup of Exhibit 16.

Q Please describe to the Court what is shown in photograph 16A with reference to photograph 16A.

A In Plaintiff's Exhibit 16A this is a blow up photo of again the exit and view in the same mold as we showed in 15A from the side.

Q What do you mean the same mode?

A At the same instant this picture was taken when we had this picture taken.

Q The pusher plate has displaced the top of the stack, do you mean?

A Yes.

Q Do you notice it had almost reached to the extremity in the cam track and it has displaced the top of the stack almost to the end of the stroke of the cylinder?

Point out where the position of the stack is in photograph 16A with particular reference to the vertical drive rows?

A In Exhibit 16A, you see the pusher still in engagement with the trailing edge of the top of the stack. It has displaced it now to a point where the leading edge of the

cutoff or top of the stack has now come into engagement with the vertical drive rollers, one on each sideof the displaced top of the stack. Each of these are driven by an independent motor at a constant speed without respect to the speed of the understack of the belts or folders.

MR. WYATT: Please mark this as Plaintiff's Exhibit 17, another photograph of the Universal underfeed stack.

Q I refer you to Plaintiff's Exhibit 17a which is blown up and will you describe what is shown there to the Court?

A In Plaintiff's Exhibit 17A the pusher has displaced the stop of the stacks to approximately a five inch displacement at which time the vertical drive rollers engage the cutoff stack on either side of it, removing it from the machine. At the same time, the pusher pneumatic cylinder is starting its arcuate return path, having been pivoting at the cam folder, and is following up a ramp and will return on the top side of the ramp.

MR. WYATT: Please mark Universal understacker as Plaintiff's Exhibit 18 and the blowup of that photograph as Plaintiff's Exhibit 18A.

Q Will you explain what is shown in the photograph Plaintiff's Exhibit 18 A with reference to the photograph of

Plaintiff's Exhibit 17A.

A Plaintiff's Exhibit 18A is an exit end view of the understacker in the same operational mode as Exhibit 17A and it shows from a side elevation and that you will note, what is happening in 17A, the top of the stack having engaged the vertical drive rollers on either side has been removed from the machine by the vertical drive rollers. The pusher was shown as it is now arcuatingly returning to its starting position.

Q With reference to these vertical drive rollers, can you tell us is there any connection between the operation of those and the operation of that pusher plate.

A The vertical driver rollers are driven by a motor and a gear reduction independent of the entire machine. The motor is a constant speed motor and fixed ratio to the drive rollers. On this side, we have a fixed motor and fixed ratio and the same and no relation to how fast you run the machine or how slow or when the pusher pushes.

Q In other words, can we say at the removal of the stack by these vertical drive rollers is totally independent of the speed of the folder?

A Yes.

Q Also independent of the speed of the underlying conveyor as shown here in Plaintiff's Exhibit 3A and 5A, this

conveyor marked P in 5A?

A Yes.

Q Would you explain to the Court the two in reference to 5A is the device in 5A and the devices shown in these photographs that you have just decribed, do they operate essentially in the same manner other than the difference as you pointed out?

A Other than the differences in the method or in the device used to pivot the pusher and pneumatic cylinder arcuately in a return stroke and the other function is remaining the same in this machine and the force production model as we have now with the new mechanical cam lifters there.

MR. WYATT: I offer in evidence Plaintiff's Exhibit 12 through 18.

MR. FABER: No objection.

THE CLERK: So marked.

Q Would you explain the two modes of operation of Universal production underfeed devices and by that I mean with referecne to an adjacent folder gluer or whatever other machine you may be operating with?

A In normal operation, we have , we can run this under the stacker in two modes: One is a manual mode and one is the automatic mode.

In the automatic -- manual mode, which is favored in a number of places, the speed of the understacker conveyor belt is set at some speed, always in excess of the folder gluer and from experience, the operators have decided that the place to set it is at the maximum speed that they can get under the understacker, regardless of speed of the folder gluer. They can run this at 100 feet a minute. This will be running 900 feet a minute because that was 200 feet a minute and this will be 900 feet a minute.

Q During those operations, let us say, where you set this at running at 200 feet a minute and the conveyor 900 feet a minute, is there any relation to that speed and the speed of the takeoff rolls?

A No, sir. This speed is independent of what you said. This is a fixed speed, when the machine comes on, and it runs on that speed and that speed only.

(Continued on next page.)

Q Now, is there any relationship between the speed of this conveyor here underneath and the operation of the pusher, is there any relationship there at all?

A THere is no relation between the speed at which you run this conveyor belt and the speed at which this pneumatic pusher cylinder operates.

Q Can you tell me why that is, that there is no relationship between that conveyor and the pusher, how does it cperate so that that is a fact?

A This conveyor down here, which is the transport conveyor, is only interested in getting the blanks away from the folder into the stack.

Q If people stop feeding in blanks manually -- they feed them in at the end of the folder gluer, don't they?

A Right.

Q If they stop doing that and this machine keeps running, does the pusher continue to operate periodically, even though there are no blanks coming in?

A The pusher will not operate periodically. The pusher, in the event there are no blanks coming in, and the counter has not reached its predetermined set count, the machine can run and the pusher will sit until further blanks are fed in and the counter has achieved its count at which time,

and only then, will it operate. In other words, it operates intermittently.

Q Is there any relationship between the operation of that pusher and the operation of the underlying conveyor?

A There is no relation between the pusher or the underlying conveyor, the transport conveyor.

Q As a separate question, is there any relationship whatever between the operation of that pusher and the movement or the operation, the speed of this folder-gluer that is shown on the right?

A There is no relation between the operation of the pusher pneumatic cylinder and the speed of the folder-gluer belt, which is the machine adjacent to the understacker.

Q You explained the manual mode. In the automatic mode of operation is there any relationship between the speed of this folder-gluer here shown on the right and the speed of that underlying conveyor?

A In the automatic mode we have an eddy-current drive, which is a very inaccurate tracking drive.

In normal operations, and depending upon the desires of the customer, the machine may be set up at an ratio between the speed of the folder-gluer belts and the speed of the understacker transport conveyor.

They are always set up so that the understacker belts are always faster than the folder-gluer belts.

With that in automatic mode, I would like to repeat these questions -- when you have an eddy-current drive that concerns the speed of the folder-gluer and the speed of the understacking conveyor, is there any relationship between the movement of the pusher and either synchronization or any other type of relationship between the pusher and the underlying conveyor drive?

A When the machine is run in the automatic mode there is no relation between the speed of the pusher pneumatic cylinder --

Q The actuation of the pusher.

A The actuation of the pneumatic pusher cylinder and the transport conveyor belts.

Q In the automatic mode, is there any relationship whatever between the actuation of that pusher and the speed of the folder-gluer?

A In the automatic mode there is no relation between the pneumatic pusher cylinder and the speed of the folder-gluer belts.

Q Which is used more frequently, the manual or automatic mode?

A From my personal observation, the range of sizes of

boxes used varies in some plants so that the operators prefer to set the machine in the manual mode at the highest speed so that they don't have to change any speed relation setting.

They set this at one speed and leave it there and they can run their folder-gluer belt at any other speed they desire.

Q And as a final question, Mr. Palli, would you tell the Court whether or not it is possible to use the Universal underfeed stacker with the folder-gluers of other manufacturers other than Universal. And if so, why is that true?

A We can use our understacker with other manufacturers who manufacture folder-gluers primarily because our understacker is modular construction and we have no relation to the folder other than the running of the belts, faster than the folder belts in the adjacent machine.

Q Have you actually installed and useed the Universal underfeed stackers with folder-gluers of other manufacturers?

A Yes, we have.

MR. WYATT: We have no further questions, your Honor.

THE COURT: All right.

CROSS-EXAMINATION

BY MR. FABER:

Q Referring to the Exhibit 5 and Exhibit 12 structures, which I believe you referred to together, this combined structure of the Exhibit 5 mechanism with a substitution therein of the Exhibit 12 control of the pus ler is now your latest structure for use in connection with folder-gluers; is that right?

A Yes, sir.

Q Do you know what I mean -- you know, of course, what a glued box is, don't you?

A Yes, sir.

Q And in just about as few words as you can, will you describe the essential character of a box that has been glued?

A Essentially, with our system in the understacker, when the box has been glued or the laps have been closed in the folder, we do not put any pressure on the glued laps. As we come into the understacker we have feed rollers that ride off the glue laps. We do not ride on the glue laps or try to test the glue before it gets into the understacker. We also have very little -- there is about a two and a half percent gain on the top feed rollers tending to draw the top panels forward leading, so that when the glued box enters

underneath the stack, the combination of our pivoting slapper and the gain pushing the top panels forward, we get a square box.

MR. FABER: Would the reporter please read my question, and listen to my question and answer it.

(Question read.)

THE COURT: He wants to know what the essentials of a glued box are.

Q What does it look like?

A A glued box must have glue, laps and be square.

Q A glued box, when you look at the side of it, it has a tab down the seam that extends down past the seam, isn't that right, a long tab down the seam?

A Yes.

Q In the same as simple terms, please describe the essential character of a taped box, what do you see when you see a taped box, what will you see when you look at a taped box?

THE COURT: You mean the seam being taped?

MR. FABER: Yes, sir.

THE COURT: I suppose he sees the same things I do, tape on the seam.

MR. FABER: I didn't know I was making jokes,

and I don't think laughter is called for by my opponent.

Q You see a piece of tape over a seam?

A Yes, sir.

Q This device of Exhibit 12 and Exhibit 5 is to operate on glued boxes, isn't it?

A Yes, sir.

Q Will you kindly explain to me why what I see in Exhibit 18 and Exhibit 16 are taped boxes?

MR. WYATT: We will stipulate, your Honor, that they are indeed taped boxes.

THE COURT: I saw it.

MR. FABER: That isn't the question. I don't need any interruptions. I'm asking him whey they are taped boxes. It's quite different.

A The machines shown in those photographs were taken in our assembly shop --

Q Then you grabbed any boxes you could find to put them in to show how it worked, is that it?

A To test our machines we don't have fresh boxes. We have to use what we have in plant. And these happened to be taped boxes.

Q And since this machine is to work on glued boxes, you do your demonstrating and testing with taped

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boxes, is that it, or is that just for the benefit of helping the Court?

A It can be either way, sir. It is not important at that time when we test our machines.

Q But this is not a real operation in Exhibit 15 and 18, it just is set up so you could take a picture, is that it?

A Yes, sir.

MR. WYATT: May I also stipulate the same thing is true with your photograph.

MR. FABER: I haven't asked for a stipulation.

MR. WYATT: We set up the same way for the same purpose.

MR. FABER: I think it should have appeared on direct, your Honor.

THE COURT: Off the record, please.

(Discussion off the record.)

(Continued on next page.)

Q We come to Exhibit 12-A and Exhibit 5-A. One is a blow-up of the other. You have a finger in there that waves up and down to let the roller go by, is that right, in Exhibit 12?

A Yes, sir.

Q And actually, what happens is a piston pushes the pusher of Exhibit 5 in one position, and the pusher has got this roller on the track, and the roller rides between these two tracks at about the middle of Exhibit 12, but the tracks are short, is that right? It rides between the two tracks? Let's stop there.

A Yes, sir.

Q And it comes to a switch track, the equivalent of a switch track, where it pushes the switch element, or finger, aside so it can get past the switch element; is that right, just like in a trolley car switch?

A Yes, sir.

Q All right. And after it is past the equivalent of the trolley car switch or railroad switch, now the spring puts the switch down so that when the roller comes back it goes on a different track, is that it?

A Yes, sir.

Q As far as the operation of the device is concerned, do you remember Mr. Pulda testifying that on

the original seven inch stroke of Exhibit 5, two inches of stroke was taken up sort of getting going, and only five inches was operative -- Isn't that right, do you remember that?

A Yes, sir.

Q Is that correct?

A Yes, sir. We have two inches of pre-travel, and five inches for displacing at the top of the stack.

Q Does that also apply when you use the Exhibit 12 modification, two inches of pre-travel and five inches of real engagement?

A Yes, sir.

Q And most of those two inches of pre-travel are taken up by that rigid, unmoveable rail, isn't that right?

A Proportionately, sir.

Q Most of it, right?

A I would have to measure it, sir.

Q Measure it. It's all right.

A I don't know what that blow-up scale is there.

Q This scale has been fudged also?

A No, the blow-up, the ratio of the blow-up, I don't know what that is.

Q You can determine whether something is two-seventh, it's very easy. Take a look, take your ruler out,

and take a look, and tell us whether most of that initial two inches of travel is beneath the rigid track.

MR. WYATT: If you have a ruler and a scale, may I suggest, Mr. Faber, you give it to him. You can't ask him to do it if he doesn't have one.

MR. FABER: I don't have one.

MR. WYATT: He doesn't have one up there.

MR. FABER: This witness knows the answer, and he can answer it, and use ever tool he wants.

MR. WYATT: If he doesn't have the tools, I would object to that.

MR. FABER: Will you please ask him to give me an answer.

THE COURT: As to what, as to what the scale of that item is?

MR. FABER: I simply asked him, most of that wasted two inches of travel is taken up within the confines of this rigid track, and he is suddenly unable to tell me.

THE COURT: Is that true or false? The top track and the lower track are rigid parts?

THE WITNESS: Right. Whether it is two inches or more or less, I would have to measure

it, sir.

THE COURT: Can you measure it on that, or do you have to have the actual scale?

THE WITNESS: If we had a scale, we could approximate it.

MR. FABER: I will ask it in another way.

Would the court be good enough to provide an ordinary twelve inch ruler?

THE WITNESS: Thank you.

Q On that copy of Exhibit 12, please measure -- I don't want your ultimate measurements now -- Measure the distance that the roller travels, then the distance that the roller travels as confined by this rigid track, and tell us whether it is two-sevenths, 2.27ths, 3.77ths, whatever it is, in terms of seven inches.

A Under the rigid track, the roller from start moves out three inches.

Q Then how much further does it go after it goes three inches?

A After it moves out, it goes out four inches.

THE COURT: An additional four, or is that the total?

THE WITNESS: An additional four inches,

a total of seven inches, your Honor.

BY MR. FABER:

Q Would you tell me, the rollers start at the point indicated on Exhibit 12?

A Yes, sir.

Q And how far past the lefthand point of the finger does that roller go?

A Approximately between one-thirty-second and a sixteenth of an inch, sir.

Q The center point of the roller, how far does that go past the point of the finger?

THE COURT: You mean the center part of the roller, he doesn't mean --

MR. FABER: He apparently means the edge of the roller.

A The edge.

Q And you have measured this off as three-sevenths rather than two-sevenths, is that right?

A That it is restrained underneath that fixed portion, A57301.

Q Do you have it restrained for every part out to the righthand part of its periphery, or are you accounting for the curvature as you pass the center point of the roller?

A As it passes the center point of the roller, sir.

Q In other words, then, you are looking only at the center point of the roller?

A That's right, sir.

Q As the center point approaches, begins to leave the rigid track, it is now no longer under its dominance, is that right?

A Under the rigid member A57301.

Q Now, as that roller moves under the finger -- the thing you have called a finger -- it pushes the finger up, is that right?

A Yes, sir.

Q Now, you have pointed to a part, a little blocker inside that hinge, that was put there to keep the finger from going all the way up and then hitting the top. What is the reason for the existence of that little blocker in there?

A The reason for the finger extension, as I pointed out on Part A57301, is to restrain the movement of the pusher plate, and also to restrain the finger from listing too far out of the way, so as not to come down and insure that it will always get under the roller, to reduce the stroke, the pivoting stroke of the finger, so that it can never -- it will always drop, once the roller has gone by it.

Q Is its purpose to prevent, then, the finger from going up past a certain angle or center line, and thereby permitting the roller to rise; is that its sole purpose?

A Yes, sir.

Q In other words, you had to add that little finger to keep that roller from rising, is that right?

A No, sir. We didn't add it. That was in the original design.

THE COURT: He means, when you constructed that design and made it, you had the finger put there for that reason.

THE WITNESS: Yes, sir.

THE COURT: All right.

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(continued on next page.)

Q Without that finger there this operation could take place just as well as long as this spring in the middle was strong enough to yank the finger back after the roller went by; isn't that right?

A Not necessarily so. Depending upon the speed, how fast the pusher went out. If there were no stop there, that finger could fly up and if the return stroke was fast enough, that roller could get back up underneath that finger.

Q But you knew what the return stroke would be because you had it air-controlled back and forth, didn't you? You knew how fast the pusher and the return was, you described it that way?

A To insure that it would always come back over the top of the track we limited the stroke.

Q Rather than just make the spring strong enough to do the job?

A You make a stronger spring in that regard, sir, now you induce another wear point. You start wearing the roller and the --

THE COURT: You are adding an additional force someplace. I know what he is talking about. It stops and it comes down again. I don't have to have any more pictures. I understand it.

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MR. FABER: What you are telling me in a very simple way is go on to the next subject.

THE COURT: I caught onto the case this morning. In another day you will know that I know the whole case without worrying about it any further. I will listen.

Can't we cut out some of this stuff?

MR. FABER: This colloquy is worthwhile because it tells us where we are getting across and where we are not.

THE COURT: I can describe everything you said this morning. I can describe whatever you say.

You mean to say you weren't too certain whether I understood what was going on?

MR. FABER: Please don't ask me a question like that.

THE COURT: I have to ask you that question because the presumption or your inference you are drawing is improper and unreal.

MR. FABER: I'm not trying to draw that inference.

THE COURT: It is a horrible presumption to draw. I will draw the presumption and you draw

the inference, but that is not right. I can practically read back the testimony that was in this case from this morning, and you better believe it, without looking at the minutes.

MR. FABER: I am looking at other minutes.

THE COURT: I say without looking at the minutes. I can almost tell you what happened from this morning to this afternoon.

This seems to indicate to me that you think that I don't understand what that diagram is all about. I know what that diagram is about, and I know what all the rest of them are all about. I thought everybody understood that.

MR. FABER: The purpose of that question was not to tell the Court again what it already obviously knew, but to bring before the Court something which is not --

THE COURT: Let me hear w at I missed.

MR. FABER: Something that has happened here equivalent to the use of the tape on the blanks, the fact that -- just in a very brief summation, what these men have done --

THE COURT: You are not mindful of the fact that I saw both machines. I spent, I think,

something like three-quarters of an hour looking at both machines. I know pretty well how both machines operate.

As a matter of fact, I was talking to both lawyers while I was looking at it and we went through it together. Both of them tried to get a word in edgewise every so often to see if they could get the added advantage -- I haven't forgotten that. We even went to have lunch after that. No problem.

Am I right?

MR. WYATT: Yes.

MR. BERLINER: But I point out that this device was not one you looked at.

THE COURT: I know that. I didn't see that one. I looked at the two machines that they showed me.

MR. FABER: The problem here is one of focusing in on the issue. In our opening we talked about a claim, and the end result is, as you know, this Court will have to say this claim is valid or not valid.

THE COURT: No question about it.

MR. FABER: And if the Court says it is

valid then it has to say whether it is infringed or not.

MR. WYATT: We stipulated to that, your Honor.

THE COURT: Everybody stipulated to that.

MR. FABER: I don't know whether you need a stipulation to tell the Court to do what it has to do. That's what the case is about.

THE COURT: I will concede one thing, I am absolutely not an expert in patent law -- for the record. But I will tell you one thing, by the time the case is over I will know this case. I may not know any other patent case, but this one I will know.

MR. FABER: I have to step back now another stage. Over the years there is only one group in this whole United States, and that is a small minority, the patent bar, that says maybe we ought to have a patent man appointed a district judge.

THE COURT: Do you think that would help?

MR. FABER: No.

THE COURT: How many patent cases would he get? He would be sitting for the rest of his

life doing nothing.

MR. FABER: He would be handling the other cases as well.

What we have had, the problem we have had with patent cases is the very problem we have, say, in a case of an elevator accident, the very problem we have in a very complex corporate matter and the very problem we have in a complex anti-trust matter, there are facts that have to be taught the Court.

THE COURT: Do I understand you to say that you do not believe in diversification of a person's ability in the law?

MR. FABER: I'm saying quite the opposite.

THE COURT: Do you realize how diversified a judge is? I had a criminal case yesterday, the week before I had a bankruptcy evasion case, the week before I had an Internal Revenue case, the week before that I had a maritime case on a boat.

Do you think that you could stand there and try all of those and know the law that applies to them?

MR. FABER: No, sir.

THE COURT: Counsellor, with all your years

7 Palli-cross

as a lawyer, do you think that you can walk into this Court tomorrow morning and try a maritime case?

MR. FABER: I wouldn't know what to do.

THE COURT: I walk on the bench and try a maritime case, I walk on the bench, never tried an Internal Revenue evasion case and I tried that.

MR. FABER: I wouldn't dare.

I am saying quite the opposite, your Honor. I am saying that the general principles of law that a judge knows and that a good lawyer knows are with experience applicable to every single field of the law.

To appoint the man as a judge, for instance, because he is a good patent lawyer is to ignore the fact --

THE COURT: You are saying no one in the United States should be president unless his son is president, too.

MR. FABER: A particular field of law is all alone by itself. It isn't --

THE COURT: Patent law is no different than any other law. As far as I am concerned, it is

no different than any other law. All you have to do is learn what the schematic drawings are about and you know what it is about.

MR. FABER: Patents are in the field of torts or in the field of contracts, depending, and these courts just by the very nature of their existence, hear more law and get more experience on that than anybody in any particular field.

THE COURT: Now you are agreeing with me?

MR. FABER: Pardon?

THE COURT: Now you are agreeing with me?

MR. FABER: I did agree with you before. I want to ask you to grant me one indulgence, to take a look at the record after it is typed, the record of ten minutes ago and you will see I am saying then what I am saying now, that I have not changed my mind in any hypocritcal manner. I am not trying to curry any favor.

Coming back, if I may, to this case, your Honor, the issues fall within the realm of law that is applicable both to this situation as well as to others. Is the patent valid? That's your job. Is the patent infringed? That's your job.

THE COURT: Absolutely.

MR. FABER: When I ask these questions here, I am going into the question of infringement --

THE COURT: Sure, of course you are.

MR. FABER: When I asked questions about this particular issue in 5, being able to rise up and down, because the claim says it can rise up and down, I am asking questions about infringement and you recognized it too.

When I start asking about this finger moving up and down and suddenly they stick something in to keep it from doing so, I ampointing in the direction of infringement because the next set of questions, whether of him or of our own witness, to save time, it may be of our own witness, is as to what happens to the stack and what goes on there.

I wanted to correct the record.

(Continued on next page.)

:ØZ
:Lastpm

Q Do you recall when you were -- well, were you present when Mr. Pulda testified?

A Yes.

Q Do you recall what he said about Section 2 of that particular exhibit, defendant's Exhibit B?

A Not in detail.

Q Let me ask you, does that Section 2 show a right angle section conveyor and squaring table?

A Section 2 in the photograph does not actually show it but from prior knowledge of what is behind that section there is squaring, a suction belt and a squaring section there.

Q Is your experience with corrugated machines started with your first employment with Universal?

A Yes.

Q In 1971.

A Yes.

Q Before that your experience with printing was with the manipulation of thin sheets on which printing was to be performed; is that right?

A Not necessarily. Thickness of the sheet could vary from thin to very thick cardboard.

Q What do they make, newspaper presses, there?

A Newspaper and magazines.

Q And at Hoe? What kind of presses do they make?

A Newspapers, magazines, metal decorating.

Q And course is part of what?

A North American Rockwell.

Q Originally Harrison?

A No, Metacors Stix.

Q What happened to Hoe?

A They went into bankruptcy.

Q Can there be a zero space in between the boxes in Exhibit 5?

A Will you clarify that question?

Q Do youknow what the term gap is in the industry -- between the arcs in the folding machine to other devices, the space in between the boxes?

A Yes.

Q Can it be zero space between the boxes?

A If the machine is set right, no.

Q Can the machine be set to have zero spacing between the boxes and still perform the operation it is supposed to perform both for folding and stacking?

A No, it cannot operate with the zero spacing.

Q You must have enough spacing so the photocell can tell the difference, is that the reason?

A Yes, and also so there is no jam-up between leading and trailing edges from transferring from one machine to another.

Q What is the minimum spacing you can have and avoid jam-up?

A From my experience a minimum spacing of roughly a half inch to three quarters.

Q May I recall or may I bring to your attention a deposition that you took, that was taken of you by Mr. Berliner in which the following question and answer was given:

"Q Assuming that boxes are being fed to the mechanism of defendant's Exhibit 9 from a fifty inch press, what is the minimum spacing between boxes as they enter the device in defendant's Exhibit 9?

"A The minimum spacing between sheets on a fifty inch press, as the sheet enters the understacker can vary from zero inches up to one inch with the maximum at the broad side."

Q Did you make that answer?

A Yes.

Q And is that statement still valid?

A Yes. That gap is depending on the setting up of a

machine, what your relative speed is and your printer slider as well as your ratio of your folder gluer to the understacker. They can be at random but always the trailing machine is always faster than the lead machine.

Q Do you remember the prior device where you had the lift cylinder in Exhibit 5? The existence of that lift cylinder made it possible for you to actually reach in and lift up that pusher with your hand because of the counterbalance created by the pressure in the lift; isn't that right?

A No.

Q That isn't possible?

A Yes.

Q Why was that counterbalancing pressurein the lift cylinder?

A From experience that counterbalance was a misnomer. Actually it isn't a true counterbalance. There is a higher pressureon the top of thelittle second pneumatic cylinder with the weight of the entire assembly plus this pressure, slightly higher than the bottom pressure.

Q In other words, the bottom pressure is sufficient so that it is supporting all but a very small portion of the weight of the pusher and it is associated, the associated mechanism -- is that another way of saying it?

A Not a very small pressure.

Q Is it -- well, it's supporting a great deal of the weight of the pressure and the mechanism connected to it?

A It doesn't in actual practice support it with the weight of the system plus the top pressure, the piston in that second pneumatic cylinder sits in the pusher which means it is bottomed out with the pressure and another pressure on the backside of it. Normally that is referred to as a speed circuit.

Q If any pressure were applied to the bottom of that pusher, would you say it would not be able to ride because of that pressure at the bottom?

A It would have to be a considerable pressure and long duration.

Q Like how many pounds, when you say considerable?

A I don't know. I never measured it.

Q Suppose I told you that it was, it might be possible to reach in and lift with your hand while it was started, would you agree with that statement or not?

A No, sir.

MR. FABER: That is all.

MR. WYATT: I have no questions.

THE COURT: All right. We will recess until tomorrow morning at 10:00 o'clock.

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UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF NEW YORK

----------x

KOPPERS COMPANY, INC., and UNIVERSAL CORRUGATED BOX MACHINERY CORPORATION,

Plaintiffs,

-against- 70-C-926

S&S CORRUGATED PAPER MACHINERY COMPANY, INC.,

Defendant.

----------x

United States Courthouse
Brooklyn, New York

February 8, 1973
10:00 o'clock a.m.

B e f o r e:

HONORABLE MARK J. COSTANTINO, U.S.D.J.

BURTON SULZER
OFFICIAL COURT REPORTER

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THE COURT: Case on trial.

MR. WYATT: May we recall Mr. Fischer, our expert witness?

THE COURT: Yes.

MR. WYATT: Mr. Fischer, will you step forward, please?

D O N A. F I S C H E R, having been previously duly sworn by the Clerk of the Court, resumed the stand and testified further as follows:

MR. WYATT: Your Honor, we have a copy for your Honor of Plaintiffs' Exhibit 19, the file history of the patent in suit, which we have marked for identification as Plaintiffs' Exhibit 19.

THE CLERK: Document marked for identification as Plaintiffs' Exhibit 19.

(So marked.)

MR. FABER: If that is the official file wrapper, it should be marked in evidence.

THE COURT: Yes.

MR. WYATT: We offer it in evidence, your Honor.

THE COURT: All right.

DIRECT EXAMINATION

BY MR. WYATT: (Continued)

Q Mr. Fischer, have you studied the file history of the patent application for the Shields patent in suit?

A Yes, I have.

Q Would you briefly review this history for the Court, please?

A This file history is, of course,the history of the prosecution of the patent through the Patent Office, and I have numbered -- this is about the first one I have ever seen that has not got the pages numbered, so I numbered the pages so we can find what we are talking about.

THE COURT: I see that.

THE WITNESS: Right. The first part is just the cover pages, but the application which was sent in begins on page 3 and it continues on to page 9.

This is the specification. Then at page 10 is a copy of the claims as originally filed with the patent application.

If you look on page 10 you can see the interlineations that have been added in response to the applicant's changes.

There is one point at the bottom of the claim, there is a little d-1, and that indicates

that -- about four lines were added at that point, but they didn't write them in. Later on I will point that out.

MR. FABER: One moment, please. The page number that the witness is referring to is different from the page numbering --

THE COURT: I see that. Page 10 is page 8, actually, at the bottom.

MR. WYATT: The original was numbered improperly and we have simply started on the first page and numbered it all the way through.

THE COURT: May I say then what I think?

MR. WYATT: Yes, your Honor.

THE COURT: All right. The first two cover pages merely identify what it is, and they start the history at page 1.

Do you see that?

MR. WYATT: Yes, your Honor.

MR. FABER: I just asked for clarification. I have a page 3, which is really a graphic chart, and I want --

THE COURT: Page 3 is where the history actually starts -- in the file, it is page 1.

MR. FABER: Then there is something important

missing from that copy. There is a page that looks like this that should be in there.

THE COURT: Where is that?

MR. FABER: It is called Index of Claims and the Examiner's Search Notes.

THE WITNESS: It is on 61.

MR. WYATT: Page 61, on the official copy from the Patent Office.

MR. FABER: Thank you.

THE COURT: Page 61.

THE WITNESS: Yes, your Honor.

THE COURT: All right.

THE WITNESS: So to proceed, then, on page 10 Claim One is the claim we are interested in. You can see the changes that have been made to Claim One. Then the first Examiner's action --

Q Will you just stop a second and explain why those changes occurred, Mr. Fischer; tell us briefly how that happens?

A Well, due to some requirement of the Examiner, which we will get to later on here, you will see why these changes were added. Then the first -- it is called an Office Action. That means it is the action of the Patent Office. It appears on page 19.

There the Patent Office Examiner cites some references, among which is Chandler, and he also states that the --

THE COURT: Greenwood, too.

THE WITNESS: He also sets forth Greenwood, Hudson and Paine.

Then he goes on to state in his Action the various reasons for not allowing it and for not understanding it.

He says, for instance, at the bottom of paragraph 2, "The cooperation between rails 105 and 107 and 108 is not understood from the specification. The description would be helped by showing a drawing."

Then in the next paragraph, he says, "How does the pusher plate rise in response to the movement of the top of the stack through rails 107 and 108 and wheels 105? How do hold-down strips 100 and 101 function?"

Then he states, "The description is indefinite."

Then over on page 20, which is the second page of the Office Action, in the third paragraph, he states, "Claims One to Eight are rejected as

based on an indefinite disclosure for the reasons given hereinabove."

Then in answer to that, the applicant sent him an amendment, it starts on page 21, and various changes are made in the specifications to overcome the objections the Examiner had.

This amendment continues, for instance, on page 25 at the top, the Examiner is asking about the wheels. He says, "The cooperation of wheels 105 guided by rails 107, 108 permits pusher plate 92 to rise and thereby prevents an excess downward force from acting on the lower portion of the stack."

Then he makes changes in the drawings and he shows these changes on pages 27 and 28. I'm not going to go into those.

Then on page 29, we have another Office Action from the Patent Office, and it states, after citing a number of additional references, it states in the first paragraph, "Operation of applicant's device is still questioned."

In the bottom paragraph, "Claims One to Eight are rejected as being drawn to a device, the operation of which is inadequately disclosed

for the reasons stated above."

On the second page--

Q Page 30?

A That would be page 30. In the second paragraph, he says, "Inasmuch as they are understood, Claims One and Three to Eight are rejected as unpatentable over Greenwood in view of Binker or Taylor and Hess or Chandler. Greenwood shows a box blank stacker which operates in the same manner as applicant's device. Either Binker or Taylor is relied upon to show a jogger."

Then he talks a little more about Taylor and Binker. At the bottom of the paragraph, he states, "All of these expedients are within the skill of the average mechanic and would not produce any new or unobvious result."

Then the applicant makes another amendment and it is in this amendment on page 32 where the lugs were added that I talked about when I originally explained the patent. The lugs are added in the third paragraph. Then on page --

THE COURT: What Exhibit would that be?

MR. WYATT: For the lugs?

THE COURT: Yes.

MR. WYATT: It is on the second page, your Honor, of the patent drawings.

THE COURT: What is the Exhibit number?

MR. WYATT: 1-B.

THE WITNESS: 1-B.

Then also in that amendment the applicant states, on page 36, this is the part that I will refer to later, "The ejection means of both the Hess and Chandler patents are operated intermittently, thereby making them totally unsuited for a high-speed stacking device such as illustrated in the instant application, that is, a member operated intermittently under conditions of high impact loading will soon fail."

So that statement is made on page 36, and I am going to refer to it later when I talk about the claims.

THE COURT: All right.

THE WITNESS: Then the drawings, there was a change in the drawings. Then there was an Office Action on page 41 again.

Q That is paper No. 9?

A That is paper No. 9.

THE COURT: I have it.

THE WITNESS: And in the last of that paragraph, the Examiner states again, "In view of these teachings, no inventive skill would be

involved in providing Greenwood's stacking device with Hart pusher means nor in modifying Greenwood's plate 19 by imparting oscillatory motion to it as shown by Link, et al., as these expedients would be within the skill of the average mechanic and would not produce any new or unobvious result."

In answer to that Office Action, the applicant added some more claims and made some more remarks. On page 48 he made a remark bearing on longitudinal direction. He says in the middle paragraph, "Each of the Claims One and Nine recite structure for forming a stack which is fed from below while straightening the blanks of the stack. This structure is recited as including a plate which abuts the trailing edge of the blanks and is periodically oscillatorily movable from a longitudinal direction."

Then he goes on and the Examiner makes an Office Action on page 51, this paper No. 11, and in this Office Action the Examiner states in the second paragraph, line 6, the Examiner says, "The novelty of the invention appears to reside in the vertically movable pusher plate so that the blanks can continuously accumulate while the pusher

plate is removing a top portion of the stack. It is suggested that the word 'accumulating' be inserted after the word 'said,' line 16, Claim One. This indicates some functional purpose of the pusher plate with the blank stack."

In Claim Ten -- we are not worried about Claim Ten -- and it goes on to state in the last paragraph, "It is suggested then that the word 'reciprocally' is a more appropriate word than 'oscillatorily' to define the movement of the plate 20."

Claims One, Two, Ten were rejected.

THE COURT: One, Two and Ten?

THE WITNESS: One, Two and Ten were rejected. And then the applicant, in answer to that Office Action, on page 53, in Claim One, he added, "Said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate. Said stack being fed with blanks as the movable plate is removing said top portion from the stack."

That is the part on the claim chart of Claim One, it is the last portion that sets that out there.

We don't have an exhibit number on that big chart.

BY MR. WYATT:

Q Proceed, please.

A That part was added. Then after that was added, then Claim One was allowed.

Q Can I just interrupt you a second, Dean Fischer.

On page 52 of the file history I notice that there were other amendments made to Claim One. Would you just point those out briefly to the Court?

A Yes.

In Claim One, he changed --

Q That is on page 52.

A Right.

THE COURT: I saw that.

A Claim One, "after machine please insert thereby forming a blank stack being fed from below." In Claim One, line 9, he replaced 'oscillatorily' with 'reciprocally.'

THE COURT: I have that marked already even though you didn't go into that.

Q You can go forward, Mr. Fischer.

A Then the claim was allowed and there was reference to the part he added, the last phrase he added on page 55,

line 4 when he says, "This is accomplished by mounting the pusher plate for a limited vertical movement relative to the means for supporting the pusher plate. This limitation is not taught or suggested by any of the references cited during the course of prosecution."

Then the notice of allowance came and Claim One was allowed.

MR. WYATT: Would you please mark this Plaintiffs' Exhibit 20, this blow-up that we have over here of Claim One of the patent in suit, please?

MR. FABER: No objection.

MR. WYATT: We offer that exhibit in evidence.

THE COURT: Received.

THE CLERK: So marked.

(So marked.)

BY MR. WYATT:

Q Dean Fischer, will you please point out to the Court what is the critical language of Claim One as shown on this chart that is pertinent to your review of this file history that we have just gone through?

A Yes. Do you have a marker?

Q Yes.

A This part, which is the last phrase of the Claim, was added just before the Claim was allowed. Then the other parts that I talked about -- I have underlined the parts which in my opinion are the critical parts, and that cinludes "one of the said plates abutting the trailing edge."

Then I skip some, "being periodically reciprocally movable in a longitudinal direction."

I also underlined, "a longitudinally movable plate for periodically pushing a top portion of the stack of said blanks from the said accumulating device."

Then I also underlined, "said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate, said stack being fed with blanks as the movable plate is removing said top portion from stack."

Q Now, Mr. Fischer, would you tell the Court what type of claim this is?

I believe in the opening statement of defendants, they indicated that all claims, or most all claims, were combination claims.

Would you tell the Court what type of claim that is and what other type of patent claims there are, please?

A This is a claim which is a combination claim, that is,

has a number of parts that operate in the same machine.

There are, of course, other claims for methods and processes. There are chemical claims and there are also, when you come to combination claims, there are combination claims that include all old elements and then there are some other combination claims that might have a new element.

Q Is there an example of that you can give the Court, a combination claim with the new element?

A For instance, the Forest vacuum tube, it had an old filament, an old plate, but the grid was a new element and it worked in a new manner to make a vacuum tube.

Q Would this be a combination claim for a group of old elements?

A This is a combination claim, and it is my opinion, at least, that the elements there are shown in the prior art.

Q Were you here during the testimony of Mr. Palli and Mr. Pulda?

A Yes, sir.

Q And you have examined the Universal understackers?

A Yes.

Q Would you please, if you would for the Court, tell us whether or not Claim One can be read on the Universal understackers?

A In my opinion, it cannot, because of the reasons I

have underlined, the parts I think are critical. I don't think it is necessary to go back over the others because it is a stacking, straightening and delivery mechanism, it is adapted for use with a machine for operating on box blanks.

But they you come to this part here and it is talking -- the Claim is talking about the plates in the patent, it says, "one of said plates abutting the trailing edge of the blanks." That is referring to plate 20.

Q In the patent?

A In the patent, right. It is abutting the trailing edge of the blanks. "In the stack and being periodically reciprocally movable in a longitudinal direction to apply a straightening force to the blanks."

That refers to in the Shiels patent the movement of the plate 20 in a reciprocal longitudinal direction to apply the straightening force to the blanks.

In the defendant's device, the slapper is pivoted and in my opinion it does not move longitudinally to apply the straightening force to the blanks.

Q Could you point to Exhibit 9-A and point to how the slapper pivots?

A The slapper is down here and you can see the pivot arm going back.

Q Would you just show the Court the type of

motion that the plate has in Plaintiffs' Exhibit 1-A, the slapper plate 20; will you demonstrate to the Court the type of motion it is? Maybe you can do it with your pointer.

A They show the plate 20 -- this is one of the things that isn't very clear about the patent. They show the plate 20 in this position in solid lines, then they showed the plate 21-prime in a dotted position, which is just displaced to the right of the solid line position. This is all we are shown. We are shown two pivots and it states in the patent that the movement is longitudinal.

Q So that would be in a movement back and forth, for instance, as a piston -- reciprocating piston in an engine, back and forth like that -- would that be correct?

A That would be correct. Of course, the word 'reciprocal' was added, and to me 'reciprocal' means back and forth.

Q Whereas the slapper plates of the Universal devices have a pivoting motion about a pivot point and do not reciprocate in accordance with this language of being "periodically reciprocal movable in a longitudinal direction"? That's my opinion.

THE COURT: Are you saying that the pivoting is different, the one on the Shields is

reciprocating?

MR. WYATT: Shields moves back and forth like in an engine. On the Universal, the prior art pivots and we pivot.

THE WITNESS: Going to another critical point in the Claim, the Claim states, "and above the upper end of said plates," and this means above the upper ends of plates 20 and 57.

Q Dean Fischer, may I interrupt you a moment.

MR. WYATT: Your Honor, if I may point something out to you, when I was giving an opening statement, your Honor, there is the Rheiner case here in the Second Circuit --

THE COURT: Is that Judge Neaher's case?

MR. WYATT: I'm not sure, your Honor. No, I don't think it is.

But the Court in the Rheiner case, as far as out device following the prior art, for instance, our device being pivotal -- it is on page 21, your Honor, or our pre-trial memorandum -- the Second Circuit said in the Rheiner case, "Because the policy of the law is to construe strictly the grant of a patent monopoly, there is nothing wrong or immoral in any sense for a manufacturer

deliberately to create an article on the basis of the prior art in order to avoid infringement."

We point out here, your Honor, that the prior art has pivoting plates and that the plaintiffs' Universal devices have pivoting slapper plates.

Proceed, Mr. Fischer.

A The next critical point I marked is "and above the upper end of said plates." That refers to being on top of plates 20 and 57, "a longitudinally movable plate for periodically pushing a top portion of the stack of said blanks from the said accumulating device."

The part that I marked there has two points of differeme between this claim and the device of Universal. In the first place, the Claim states that this plate in the Shields patent pushes the stack from the accumulating device, and that means that it pushes it off of the accumulating device, it pushes it from the accumulating device.

In the Universal device, the movable plate pushes it only enough to have the vertical rollers engage and then the vertical rollers pull it from the accumulating device, so that is one important difference.

The next point is to me very important, the Claim says, "a longitudinally movable plate for periodically pushing,"

and the word "periodically" is used.

In the patent, the pusher 92 is fastened to a mount 90 and this mount causes the pusher to keep moving all the time, it's going around all the time, it doesn't stop and start, it periodically pushes the stack off, but it continuously moves and it moves in synchronism with all the other gears in the machine of Figure 1, and they are tied into the belt of another machine.

So how many boxes you get depends on how many boxes come up from the other machine. If the other machine misses four, you would miss four in the stack, but it is periodically, and that means -- I gave some figures, I think every eighth of a minute, for instance, this pusher plate comes around and pushes off the stack.

(Continued on next page.)

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Q You had mentioned I think at the rate of 200 boxes coming in perminute, that you would get a feed in of nine boxes underneath the stack while the pusher plate was moving on the top, is that correct?

A Yes.

Q Continue, please.

A The reason, in my opinion, that the word periodically is important, is because in the file history, in order to get the patent on page 36, the applicant says "The ejection means of both the Hess and Chandler patents are operated intermittently, thereby making them totally unsuited for a high speed stacking device such as is illustrated in the instant application." So let's look at the Chandler --

MR. WYATT: May we mark as Plaintiff's Exhibit 21, a blowup of the Chandler patent, your Honor, which is in the prior art book of Plaintiff's Exhibit 2 and is marked as No. 17 in the prior art.

THE COURT: One moment, gentlemen.

(Recess.)

(Witness resumes stand.)

BY MR. WYATT:

Q Mr. Fisher, would you refer to this blowup of the Chandler patent, which has been marked as Plaintiff's exhibit 21.

MR. WYATT: We offer that in evidence, Mr. Faber.

MR. FABER: No objection.

THE CLERK: Received.

(So marked.)

THE COURT: Can I have a copy of that one?

MR. WYATT: It is in your prior art book, your Honor.

THE COURT: I will find it.

MR. WYATT: The Chandler patent, I believe, is No. 17 in your book.

THE COURT: It is now Exhibit 31.

MR. WYATT: The blowup is Exhibit 21.

THE WITNESS: 17 in the book. The drawings I am referring to are figures 5, figure 6, figure 7 and figure 8.

Q Would you mark the blowup of figures 7 and 8, please, as figure 22?

MR. FABER: No objection.

MR. WYATT: Which we offer in evidence.

THE CLERK: So marked in evidence.

(So marked.)

THE WITNESS: I am referring to Exhibit 21 and figure 5, Chandler shows a stacking device and you can see the material coming in. It is marked with an arrow

from the left and it stacks by going down through a channel, and then the material rests on a plate 120.

Now, Chandler has devices 146, sort of arms, and they push the material from under the stacker. It is not from over, it is from under, and you can see the new position of the material in figure 6.

The important thing about the Chandler patent, is that the Chandler patent uses a counter, a counter just like the universal device, and after the counter reaches -- in the patent, they use the number 10 -- after the counter gets to 10, then the material is pushed away from the accumulating device and it states, to bear out my statement, that it depends on the counter, in column three of the patent, line 59, it states "Mounted also on the bed of the machine is counting device 180, which receives signals from its trigger, properly placed in the line of travel of the articles passed, for example, over conveyor 189. The counter device may be of any conventional design, and is preferably one which can be sensitized to a variety of counts readily adjustable thereto, and which also can be activated

by means of a small switch in the line of articles coming from the machine."

So it points out that a counter is used. Column five, line five, it goes on to state "The intelligence thus imparted to the electro-pneumatic system, when the specified number of units has passed over the switch, serves to initiate operation of the system."

In column six, at the top, it states "The tenth activation of switch 192, assuming ten is the set number of times, energizes a counter unit 180, which in turn trips the first step solenoid 205."

Then it goes on to tell when it is tripped that the solenoids cause the accumulated number to be moved out of the stack. So we have in Chandler a device for removing materials from the stack after a certain number is reached.

THE COURT: This solenoid, does that act to give it time to move the stack?

THE WITNESS: It makes move the stack.

THE COURT: In other words, without it you couldn't move that stack?

THE WITNESS: That's right.

THE COURT: I understand that all right.

THE WITNESS: So a solenoid is electrically like an air cylinder is --

THE COURT: I know that.

THE WITNESS: When the applicant stated "The ejections means of both the Hess and Chandler patents are operated intermittently," he is distinguishing from his own, which is operated periodically. But Chandler operates -- but the Universal device operates like Chandler so that is why I , in my opinion then -- that is why in my opinion, when the claim states "Being periodically reciprocally moveable" it refers to something different than the type of Chandler and something different from the type of the Universal machine.

Then the last point, in my opinion, which is critical, is the part that was added. From the beginning the plate 92 was fastened to the plate 90, so that it could move in a limited vertical position and the purpose was to allow material to be inserted from the bottom and so that the plate could rise while this was happening.

I gave a rough figure of approximately nine

blanks got in at the bottom if you were producing 200 a minute in the machine on the left hand side. During the time when the nine blanks are coming in at the bottom, then the plate can rise. So in the claim it was added "Said pusher plate being mounted for limited vertical movement relative to the means for supporting the pusher plate." The means for supporting the pusher plate is another --

Q Backing plate?

A Bracket or a number 90, which is held in a vertical position by the double bicycle chain arrangement.

It states that the "pusher plate is mounted for limited vertical movement relative to ..." It would be the means 90-- "for supporting the pusher plate, said stack being fed with blanks as the moveable plate is removing said top portion from the stack."

And the defendant's production devices , first the production device is the one I will cover first. In defendant's production devices, there is no moveable plate mounted on the plate, on the supporting plate or on the plate that is on the piston.

Q In Plaintiff's Exhibit 11A, for instance?

A In 11A, for instance, you can see clearly the pusher

plate, and this is mounted on a piston rod and there is no free vertical movement of any plate on thatplate like is shown in the Shields patent.

So, in my opinion --

THE COURT: You say that that was one of the two grave distinctions between the two of them?

THE WITNESS: Yes, sir. In my opinion, there is a distinction between the two.

THE COURT: The operation itself, you would say, is distinct, the method of operation, one by cylinder and the other by bicycle chains.

THE WITNESS: Right.

THE COURT: I understand that.

THE WITNESS: And also, this plate moves only two inches and doesn't eject them from the stack, but the rollers --

THE COURT: This has the rollers.

Q I think you mean it moves five inches over the stack, a total travel of seven, is that correct?

A Yes, that's correct.

Q In connection with the production models, whether it works with an air cylinder underneath or the tracks up above, there is no vertic ally moveable plate

mounted on this other plate for limited vertical movement, and there is also -- the stack is not fed with blanks as the moveable plate is removing the top portion from the stack.

Q In the prototype -- it was my understanding there was just one prototype made?

A In the prototype, while the plate did move, there was a moveable plate on the prototype, the moveable plate and the pusher didn't remove the predetermined number from the stack.

(Continued on next page.)

A (Continuing) Now, in the prototype, the pusher pushed it only five inches, and then the rollers pull the predetermined number from the stack.

And also in the prototype there was no arrangement to feed blanks underneath while the movement of the pusher plate was taking place because it worked on an air cylinder, was very fast, and the speed is just different. It is a different type of operation.

Q Mr. Fischer, can we say that in both the prototype and the production Universal under-feed stacker that the pusher does not actually either remove the top portion of blanks from the device nor does either of these Universal devices have a movable pusher plate which removes the top portion from the stack?

A That is right.

Q What does actually remove the top portion of the stack in the Universal understacker, both production and prototype.

THE COURT: The rollers?

A The rollers.

Q The vertical side rollers?

A Yes. Of course, in reference to the prototype what I said about the periodic movement, in reference to the word periodically pushing the top portion, that applies equally as

well to the prototype as it does to the production model because in both cases, both the prototype and production model, work like Chandler. They count the pieces and then intermittantly push the predetermined number off. And that is the type of operation that the applicant in his file history said was different.

I believe that covers the differences which, I believe, are critical.

MR. WYATT: May I have just a moment to consult with counsel?

THE COURT: Yes, of course.

MR. WYATT: Your Honor, I would like now to shift to another area with Dean Fischer, and that is the question of the validity of Claim 1 as distinguished what we have been talking about as to whether it has been infringed.

BY MR. WATT:

Q One other thing, Dean Fischer, in relation to the question of infringement --

MR. WYATT: Just one final question on the question of infringement, your Honor.

Would you mark the blow-up of the Gjostein patent please as Plaintiff's Exhibit 23.

The Gjostein patent is in your Honor's prior art

book. I believe it is the last one listed, 23.

BY MR. WYATT:

Q And in reference to the question of whether or not the Universal device follows what is known in the prior art as far as displacing -- having a pusher which is pneumatically operated to initially displace a top portion of the stack, Dean Fischer, would you point out to the Court the significance of the Gjostein reference?

A The Gjostein reference shows blanks in Figure 3 which are indicated by "SA."

And these blanks are pushed by Plate 15. And that Plate 15 is supported on a piston rod, 16. And 17 is a piston. 18 is an air pipe.

So it is a pneumatic system. And the cylinder, the pneumatic cylinder, is supported from springs, 26, and a pivot point, 24.

But this particular air cylinder is used to push the sheets "SA" against another wall that is used just to displace the sheets and not to remove them from the stack.

MR. WYATT: Thank you.

Now, your Honor, we will go to the question of validity.

And I now offer in evidence the blow-up of the Gjostein which is 23.

MR. FABER: I think you skipped one.

MR. WYATT: No.

MR. FABER: I am sorry.

(Article referred to, being a blow-up of Gjostein referred to was received and marked plaintiff's Exhibit 23 in evidence.)

Q Now, with reference to the suit patent, Claim 1, which is blown up here as Plaintiff's Exhibit 20, will you tell the Court whether or not you can find all the structure recited in Claim 1 in the prior art patents?

A Yes, I can.

Do you want me to go ahead?

Q If you would, please.

A For instance, the Greenwood patent shows a stacking machine with a conveyor.

And in the Greenwood patent the Blank A, for instance, is shot in under the stack. So it is an understacker.

And the Greenwood patent is made to work with another machine because B and B prime are parts of the other machine.

This underfeed stacker is also shown in Ward where you can see in Ward --

Q That is Plaintiff's Exhibit 2B.

(continued next page)

A Right.

And in the Ward patent, the stacker material is shown at 1. And you can see the new sheets coming in between the rollers -- it is actually between belts, 7 and 6, the new sheets, 1, are shot in under the stack.

So Ward also shows an understacker.

And then the Evans patent, which is 1,865,308, and I am referring to Exhibit 2C --

MR. WYATT: And the Evans patent, your Honor, is in your Honor's prior art book No. 7.

THE COURT: All right.

A (Continuing) Yes. The Evans patent shows a slapper or jogger that straightens the stack.

And the Stack is shown at A.

And this is a pivoted type like the Universal machine.

It is pivoted at 22A. And it moves back and forth to straighten the stack A.

Now, this is also shown -- in the Shields patent they refer not only to a slapper straightening the stack up but also straightening something that gets mis-glued in the glueing machine.

And in the Spiess patent -- I don't have a blow-up of that but it is No. 16 in your book -- in the Spiess patent

they solve the problem of straightening the blanks themselves. And in Column 5 of that patent, of the Spiess patent, it states, line 44:

"...This final aligning operation adequately removes any mis-alignment in the edges of the box blanks that has not previously been corrected by rollers, 120,121...."

And it goes on to state at Line 47 of Column 5:

"...For this purpose I employ a reciprocating blade, 150, which is pivotedly mounted on shaft 151 by means of angle brackets, 152 and 153. The blade 150 is caused to reciprocate transversely of the belt 140 by means of an excentric on the shaft...."

So Spiess shows the use of a pivoted -- he calls it a blade -- to straighten the blanks that are mis-folded in the folding machine.

Also Spiess shows in Column 6, the top line, and that would be Line No. 1:

"...The proper pressure for completing the adhesion between the glued flap and the cooperating edge of the folded blank is obtained by means of a Floating Pressure Belt, 162, mounted on Rollers, 163 and 164.

So Spiess recognized the problem of straightening individual blanks and showed how to do so with a pivoted slapper.

Q Was Spiess cited in the file history of the patent in suit?

A No, the patent office did not cite Spiess.

Q Will you tell the Court what the significance of that is?

A Well, in my opinion it means they did not find Spiess.

MR. WYATT: Well, your Honor, where the Patent Office fails to cite the most pertinent art the presumption of validity is greatly watered down.

Q Then would you go on, Mr. Fischer?

A And then we go to Hart which is Exhibit 2D here, and in the book is No. 4.

The patent to Hart shows a pusher that can remove material from its top of an underfed stacking device.

Hart not only removes it but turns it up on its edge. And the Hart pusher removes it all the way like the patent in suit.

Then the means to hold the pusher vertically is shown by Shepherd.

And I refer to that -- and Sheperd in the book is number --

Q Nine.

A -- No. 9. And I refer to that as the double bicycle

chain method.

And Sheperd looks exactly like the double chains on the Shields patent in suit.

And the purpose isto hold the pusher vertically and also to let it operate continuously, but periodically come down and remove material.

And then to meet the idea of using one plate in front of another plate loosely is a well-known obvious expedient.

But if you want to see it in the patent you may see it on the Crank patent, which is on Exhibit 2F.

MR. WYATT: It is No. 14 in the prior art book, your Honor.

That also wasn't cited by the Patent Office.

A (Continuing) And there it shows the use of a Plate, 28, that slides up and down on a supporting Plate, 26.

Q It is in response to the upward movement of an underlying surface?

A Yes.

Q Not the upward movement of an underlying surface but the movement over a riding underlying surface? I think that is more appropriate?

A Yes.

Q Now --

THE COURT: We will take a five-minute

recess.

MR. WYATT: Thank you, your Honor.

THE COURT: Short recess.

(Short recess.)

(continued next page)

MR. WYATT: I have a couple of more minutes, then we will be through, your Honor.

THE COURT: All right. We are moving nicely. Okay.

Q Dean Fischer, in your opinion, do the structural, or the structural elements of Claim 1 function in the same manner as they did in the prior art that you just described?

A Yes. All of the prior art that I just described, the elements work in the same way. In other words, the stacker stacks them up between plates. They feed underneath in the same wasy.

Q Dean Fischer, in your opinion, is there any new or unobvious function obtained by bringing these old structural elements together in a one mechanism?

THE COURT: That would be objectionable.

MR. FABER: I think that is the job of the Court.

THE COURT: That is my job. That is objectionable.

MR. WYATT: Yes.

THE COURT: And I remember what was said.

MR. WYATT: All right.

THE COURT: I have to draw that conclusion.

MR. WYATT: Yes.

Your Honor, one final question, going back to the issue of infringement.

Q Do the differences -- Dean Fischer, do the diffefences in the structure and the mode of operation between Universal Understackers and the mechanism set out in the claim involve any difference of result?

MR. FABER: I object. This one, it happens to be a case that the Plaintiff's attorney alluded to, Deer versus Grain, which set out the criteria that the Court must find one of which is the difference between --

THE COURT: Yes.

MR. FABER: (continuing) -- the prior art and the invention. I believe that that is not the function of the expert, but of the --

THE COURT: That is the function of the Court, likewise. The conclusion that he draws will be my function.

MR. WYATT: All right. I have no further questions, your Honor.

THE COURT: All right.

MR. FABER: May I --

THE COURT: You may cross-examine.

It has always been a problem of, where do the experts stop, and does the Court start, when it is advisory and when it is conclusory. And this is a problem I have met many, many times.

MR. WYATT: Right.

THE COURT: This is the first case of this type, I admit. But many, many times in cases similar, involving cranes and so on, and so forth. I know what you are talking about, and that we have to stop somewhere, and it becomes my province.

All right.

CROSS EXAMINATION

BY MR. FABER:

MR. FABER: I am going to try to go over certain of the points of this witness' testimony from Tuesday, trying to cover his testimony seriatim. And some of the testimony, we have our own experts here.

THE COURT: I understand that.

MR. FABER: All right.

Q Now, as I gather it, you were actually in the practice of patent law for a specific period of time, termi-

nating in 1941; is that right?

A That is right.

Q And thereafter, you went through various instructural, professorial and finally, executive department-head positions at various -- in at least two universities; is that right? Or is it only one.

A One. Just in Washington University.

Q And since --

A And all the time --

Q I am sorry.

A You mentioned executive. I wish it had been executive. But, actually, we did teach also.

Q When I see Dean of the School of Engineering, I think of the man as an executive, and he teaches by choice, rather than because he has to.

A Well, I did teach by choice. I probably could have gotten out of it, but I like to teach, so I continued.

Q Since '65, you have been a consultant on mechanical-electrical matters?

A That's right.

Q Also testifying --

A Yes.

Q Also testifying in patent cases.

A That's right.

Q All right. Now, has your contact with the corrogated board industry existed in any instance other than this particular case?

A Yes.

Q All right. Tell me about that. Tell us about that.

A When I was head of the department of Industrial Engineering -- It is located in St. Louis, Missouri -- in Alden, there were large box board plants. And in the early days, they called them straw board plants. But there were box board plants. In St. Louis there were a number of container manufacturers.

And when we started the Industrial Engineering Department, those engineers were supposed to be a little more versatile in the business field than our electrical-mechanical engineers that might fit in the design department. In other words, we were hopeful that some day they would become managers. Well, several of them did become managers of factories where they made boxes, and also all sorts of fiber tubing and cans. And in our program, we had a special project course, and we'd go to these plants and get special projects for the students to work on, so that they could solve some of their material handling

problems.

And, of course, when these men did finally become managers of the plants, they were anxious to have us come and see what they have been doing at the plant. And I visited a number of them.

And then I worked on a case for General Mills which involved the making of biscuit packages. And so I had to go -- I think we used the Sustan Can and Fiber Company where one of our graduates worked. And he made thousands of cans for us that we could test. And it was my job then to test these cardboard packages.

Q All right. Now, you have told us about the experience of your people, your group. Will you tell us specifically about your own contacts with the corrogated board industry?

And you recognize there is a distinction between corrogated board used for cracker boxes and so on, and in the corrogated --

A These were not cracker boxes. The companies I am talking about made corrogated paper. In Alden, it was a very large place. And the ones in town where our students worked, they used corrogated material to make boxes of. They didn't make just thin cardboard boxes.

Q I am still --

A And I was active in that.

Q What did you -- You are telling me what your students did, what people in your department did. I just want to know what your contact was --

A My --

Q (continuing) -- with the corrogated industry.

A My contact was to get the problem. In other words, to get the problem from the box companies. In other words, they were making boxes here, and they had to ship them out to there, and they had to cut the cost. And was there anything we could do in the handling of the boxes. We would give the students this problem, give them the layout of the plants, which the plants furnished us through our former students. Then we'd give this layout of the plants to the students. And as a special project, they would work on it and decide, maybe we out to route the boxes this way, or that way. I would look at it and grade their papers, and so forth.

Now, in connection with the General Mills experiment, however, I went to the box plant myself. I told them how to make the boxes, how to roll them, and I told them what kind of paper we wanted to use, and I told them also how many we wanted, what kind of glue to use. And then I had to finish --

Q All right.

A (continuing) -- the box.

Q So in the General Mills situation, that was the one where you were involved personally, is that right?

A Well, I personally graded the papers. Maybe some of the students wished I hadn't, but I did.

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Q Well --

A But if you say touching the paper, the General Mills, I touched it more in that case than I did in the other cases.

Q Touching the paper, watching the machiner, that was for General Mills?

A That's right.

Q All right. And when was that?

A About -- I'd suppose it was about four or five years ago.

Q Oh, as a consultant, then?

A Yes.

Q And they're probably related to corrugated boxes?

A Their particular problem, the box was not corrugated.

Q What was the box?

A It was a spiralling round box.

Q A tube?

A Wound tube, and then cut off.

It made a box. And then you put biscuits in it and wrapped the biscuits in a certain way. And if everything is right, when the housewife hits the -- it's the common container you see every day to contain buscuits.

Q Is that like the little Pillsbury man where you have -- you have the dough-shaped man who comes out and

gets tickled on the TV commercial?

A They were our competitors. That's the dough-shaped man.

Q But that's the kind of box?

A Yes.

Q Not corrugated?

A No. I didn't say that.

Q Your testimony today is based on your own experience as an engineer, an electricl engineer, your long experience in school, and your knowledge of engineering principles generally; isn't that right?

A I wouldn't just limit my knowledge to being an electrical engineer. I think electrical-mechanical engineering, they go together all the time.

Q So your testimony today, and your expertise is based on your engineering background, your general engineering experience but not on specific get your hands dirty kind of experience with corrugated board?

A I wouldn't say that because I have seen enough corrugated made. And if you want to say touch it, I have touched it and seen the glue and have been at the factories.

So I wouldn't say I don't know anything about corrugated boards.

Q But General Mills was not corrugated?

A General Mills was not corrugated.

Q When did you -- when were you in contact, and what is the contact with your -- what is the extent of your contact with corrugated boards?

A Well, at the places where we made the material for General Mills, that factory also was involved in making corrugated boxes. And, of course, I was there, when they were -- when they would make it. And Hank Straner, who was the manager, was interested in impressing me with his fine plant. So I was very well guided around the plant and got to see how they did all of these actions.

Q You went through the plants more than once?

A Yes. I would say over a week.

Q Do you know --

MR. WYATT: May the witness finish.

MR. FABER: I am sorry.

THE WITNESS: I would say I was there over a week.

Q Do you know what --

A Daily.

Q Do you know what a flute-corrugated board is?

A Yes. One smaller than the other.

Q Do you know which is smaller?

A I don't remember.

Q All right. Now, do you know the words that --the general terminology used by the people who actually are working in the field, how they describe various parts of the board in the machine?

A Well, I know the general terminology used for all -- for mechanical machines and devices, and it doesn't change from -- there may be some jargon about what they are doing, but a cam is a cam in every industry, and a wheel is a wheel and a pivot is a pivot.

Q Well, let's take a look. You have that book of the patents in front of you?

A Yes.

Q Would you open to number 16, the Spiess patent. It's number 16 on page 1 of that patent.

On page 1 of that patent, you will notice that this patent was issued to the Kieckhefer Container Company. Do you know anything about that company?

A I have heard their name.

Q Are they well known people who know something about corrugated board?

A I wouldn't know.

Q Suppose I told you they are one of the largest makers of machinery, would you have any way of knowing otherwise?

A If you represented it to me, I'd believe it.

Q I only said, suppose. I am just asking whether you have any way of knowing otherwise?

A Well, I dont know now.

Q You don't. All right.

Now, I ask you to refer to column five, lines 44 to 50, the section of the patent that you previously referred to in your direct testimony.

You will notice there in line 48, the Spiess patent speaks about a reciprocating blade 150, and that blade is to do some slapping. You notice that, don't you?

A Yes.

Q All right. Now, this is a reciprocating blade which is described by Spiess, the assignor to the Kieckhefer Company as pivotedly mounted?

A Yes.

Q All right.

Do you know, and this is -- I believe a proper answer would be yes or no, but I am not limiting you to such an answer.

Do you know whether the term reciprocating member or blade in the corrugated industry, means specifically back and forth linearly or just back and forth not necessarily linearly? Do you know that?

A Could you repeat the question.

MR. FABER: Will you read that, please?

(Record read.)

THE WITNESS: Well, I don't --

THE COURT: If you don't undertstand the question, you can say that.

THE WITNESS: I just don't understand the question. But what do you mean by the corrugated industry?

Q In the corrugated -- well, is that the part that you don t understand?

A Yes. I don't understand that they should have a different meaning of words than the machinery industry.

Q Well, you heard the question reread. Do you happen to know the language of art -- the language of art used in the corrugated industry?

A Yes.

Q All right. Do you know -- is Mr. Spiess incorrect in describing his blade as a reciprocating blade?

A Well, every man who writes a patent can -- as has often been said -- can be his own lexicographer. So this man used that word. And so I see nothing wrong with it. He did it.

Q There is nothing wrong with saying reciprocating

blade when the blade is a pivoted patent?

A Not in this patent.

Q Suppose a man in the patent says that the blade is reciprocatingly or oscillatory mounts and uses the term in that way. Is there anything wrong with your ability to understand what he means?

A But I am entitled to read his patent to tell what he means and also to read what his -- the proceedings in the Patent Office that he had, which he might have explained it.

Q So that when in the -- in the patent at issue here, Plaintiff's Exhibit 1, the patentee, at column 2, lines 31 to -- 31, 32, says that the blade is reciprocating or longitudinally has a reciprocating or longitudinal oscillatory movement. You believe, do you not, that you can understand what reciprocating and what oscillatory means?

A Where are you referring?

THE COURT: Where is that?

MR. FABER: Column two of the Shields patent, the one in suit, Exhibit 1.

THE WITNESS: What line?

MR. WYATT: What line?

THE COURT: Is that in the fine art?

MR. FABER: No.

THE COURT: It's not in the fine art.

MR. FABER: That is the original patent.

THE COURT: Fine art.

MR. FABER: The patent in suit.

THE COURT: All right.

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Q I am referring to column 2 and the term "reciprocating" or "longitudinal oscillatory movement of slapper plates 20" appears on column 2, lines 31 and 32.

A Yes, I have that.

Now, what was the -- I can refer to the file history. Was any of that added, or is this the way it appeared originally?

Q You know -- may I ask the questions and you answer them?

A O.K. Then I will look through the history and see if any part was added. Can I have the file history?

MR. FABER: Your Honor, would you instruct the witness to answer questions and save cross-examination for later?

THE COURT: Yes.

THE WITNESS: O.K.

THE COURT: You are asking him, does he know, and he says as far as he is concerned, he has to find out if it's in there or not. He's not asking a question.

Do you want to first review the history of whether you can or cannot answer that?

THE WITNESS: I may have it here. I can answer in a second.

THE COURT: O.K.

THE WITNESS: The word "reciprocating" was added.

Q In this, the specific --

A It was added during the prosecution. So it didn't appear there.

Q Oscillatory was there to begin with?

A That's right.

Q Now, from your engineering experience -- without worrying about dictionaries for a moment -- what does the word "oscillatory" mean to you?

A Oscillatory is a very difficult word to define. Now, I -- it means various things to various people. I define it as, you know, being an electrical engineer to start with, when something is rotating in a circle like this, then if you project on a straight line like this, it's in this position. You draw a line from here down to the paper. And as it turns, you draw another line, and as it turns you draw another line down. The line that you are drawing is an oscillatory line.

Now, that is sort of the classical, correct way to define oscillating.

And usually, it runs at oscillating -- it means it runs at a definite -- the thing that made this line oscillate runs at a definite frequency, a predetermined, definite frequency.